SyncMaster 400UX,460UX

LCD Monitor

User Manual

Safety Instructions

Notational

Note

These safety instructions must be followed to ensure your safety and prevent property damage.

Make sure to read the instructions carefully and use the product in the correct manner.

Warning / Caution

Failure to follow directions noted by this symbol could result in bodily harm or damage to the equipment.

Notational Conventions

Prohibited	Important to read and understand at all times
Do not disassemble	Disconnect the plug from the outlet
Do not touch	Ground to prevent an electric shock

Power

When not used for extended period of time, set your computer to DPM.

If using screen saver, set it to active screen mode.

The images here are for reference only, and are not applicable in all cases (or countries).

Shortcut to Anti-Afterimage Instructions



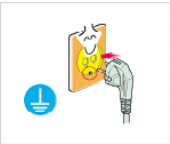
Do not use a damaged power cord or plug or a damaged or loose power outlet.

- Otherwise, this may result in electric shock or fire.



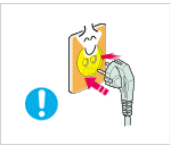
Do not touch the power plug with wet hands when removing or plugging the plug into the outlet.

- Otherwise, this may result in electric shock.



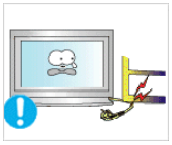
Make sure to connect the power cord to a grounded power outlet.

- Otherwise, it may result in electric shock or personal injury.



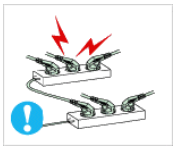
Ensure that the power plug is plugged into the power outlet firmly and correctly.

- Otherwise, this may result in fire.



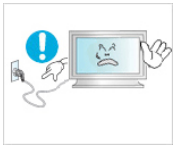
Do not forcefully bend or pull the power plug and do not place any heavy material on it.

- Otherwise, this may result in fire.



Do not connect multiple appliances to the same power outlet.

- Otherwise, this may cause fire due to overheating.



Do not disconnect the power cord while using the product.

- Otherwise, this may result in damage to the product due to electric shock.



To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

- This may cause electric shock or fire.



Use only the power cord provided by our company. Do not use the provided power cord of another product.

- Otherwise, this may result in fire or electric shock.

Installation



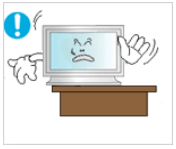
Be sure to contact an authorized Service Center when installing your monitor in a location with heavy dust, high or low temperatures, high humidity, and exposed to chemical substances and where it operates for 24 hours such as at airports, train stations etc.

Failure to do so may cause serious damage to your monitor.



Ensure that at least two persons lift and move the product.

- Otherwise, it may be dropped and cause personal injury, and/or damage the product.



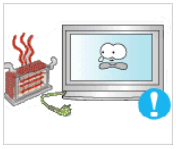
When installing the product in a cabinet or rack, make sure that the front end of the bottom of the product does not project out.

- Otherwise, it may fall or cause personal injury.
- Use a cabinet or rack of a size appropriate to the product.



DO NOT PLACE CANDLES, MOSQUITO REPELLANT, CIGARETTES AND ANY HEATING APPLIANCES NEAR THE PRODUCT.

- Otherwise, this may result in fire.



Keep heating appliances as far away from the power cord or the product as possible.

- Otherwise, this may result in electric shock or fire.



Do not install it in a badly ventilated location such as a bookcase or closet.

- Otherwise, this may result in fire due to an increase in the internal temperature.



When putting the product down, make sure to put it down softly.

- Otherwise, this may result in damage to the screen display.



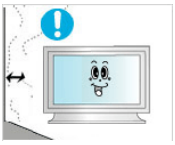
Do not place the front of the product on the floor.

- Otherwise, this may result in damage to the screen display.



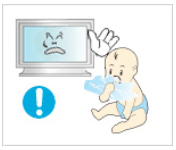
Ensure that an authorized installation company installs the wall mount.

- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.



Install your product in a well ventilated location. Ensure that there is a clearance of more than 10 cm from the wall.

- Otherwise, it may result in fire due to an increase in the internal temperature.



Ensure that the packaging vinyl is kept away from children.

- Otherwise, it may result in serious harm (suffocation) if children play with it.



If the height of your monitor is adjustable, do not place any object or part of your body on the stand when lowering it.

- This may cause damage to the product or the person carrying it.

Clean

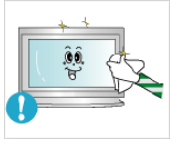


When cleaning the monitor case or the surface of the TFT-LCD screen, wipe with a slightly moistened, soft fabric.



Do not spray cleaner directly onto the surface of the product.

- Otherwise, this may result in the discoloration and distortion of the structure and the screen surface may peel off.

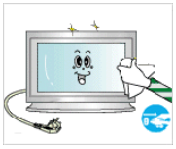


Clean the product using a soft cloth with a monitor cleaner only. If you must use a cleaner other than the monitor cleaner, dilute it with water at a ratio of 1:10.



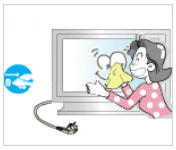
When cleaning the power plug pins or dusting the power outlet, clean it with a dry cloth.

- Otherwise, it may result in fire.



When cleaning the product, make sure to disconnect the power cord.

- Otherwise, it may result in electric shock or fire.



When cleaning the product, disconnect the power cord and clean it softly with a dry cloth.

- (Do not use chemicals such as wax, benzene, alcohol, thinner, mosquito repellant, lubricant, or cleaner.) These may change the appearance of the product surface and peel off the indication labels on the product.



Since the product housing is easily scratched, make sure to use the specified cloth only.

- Use the specified cloth adding only a little water. As the product may be scratched if there is any foreign material on the cloth, make sure to shake it thoroughly before using it.



When cleaning the product, do not spray water directly onto the main body of the product.

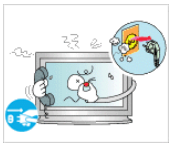
- Ensure that water does not enter the product and that it is not wet.
- Otherwise, this may result in electric shock, fire or a malfunction.

Others



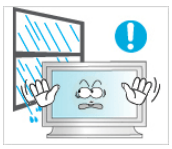
The product is a high voltage product. Ensure that users do not disassemble, repair or modify the product themselves.

- Otherwise, this may result in electric shock or fire. If the product needs to be repaired, contact a Service Center.



If there is a strange smell or a strange sound or smoke is coming from the product, disconnect the power plug immediately and contact a Service Center.

- Otherwise, this may result in electric shock or fire.



Do not place this product in a location exposed to moisture, dust, smoke, water, or in a car.

- Otherwise, this may result in electric shock or fire.



When you drop the product or the case is broken, turn the power off and disconnect the power cord. Contact a Service Center.

- Otherwise, this may result in electric shock or fire.



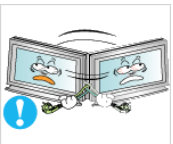
If thunder or lightening is occurring, do not touch the power cord or antenna cable.

- Otherwise, this may result in electric shock or fire.



Do not try to move the monitor by pulling only the wire or the signal cable.

- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



Do not lift or move the product back and forwards or right and left while only holding the power cord or signal cables.

- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



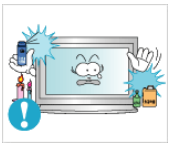
Make sure that the ventilating opening is not blocked by a table or curtain.

- Otherwise, it may result in fire due to an increase in the internal temperature.



Do not place any containers containing water, vases, flowerpots, medicines as well as any metal on the product.

- If water or a foreign material enters the product, disconnect the power cord and contact a Service Center.
- This may result in a product malfunction, electric shock, or fire.



Do not use or keep combustible spray or flammable material near the product.

- Otherwise, this may result in an explosion or fire.



Do not insert any metal, such as chopsticks, coins, pins and steels, or inflammable objects, such as matches or paper, inside the product (through the ventilating openings, input and output terminals, etc).

- If water or foreign material enters the product, disconnect the power cord and contact a Service Center.
- Otherwise, this may result in electric shock or fire.



When using a fixed screen for a long time, an afterimage or stain may occur.

- If you are not using your product for a long period of time, put it into sleep mode or use a moving screen saver.



Set a resolution and frequency appropriate to the product.

- Otherwise, your eyesight may be damaged.



When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



If you continually move closer to the product screen, your eyesight may be failing.



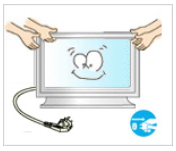
Take a rest for at least five (5) minutes after using the monitor for one (1) hour.

This reduces the weariness of your eyes.



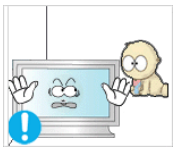
Do not install it in an unstable location such as an unstable rack or uneven surface or a location exposed to vibrations.

- Otherwise, it may fall and cause personal injury and/or damage the product.
- If you use the product in a location exposed to vibrations, it may damage the product and result in fire.



When moving the product, turn the power off and disconnect the power plug, antenna cable, and all the cables connected to the product.

- Otherwise, it may result in electric shock or fire.



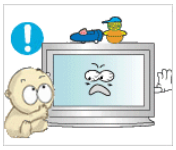
Ensure that children do not hang onto the product or climb up onto the product.

- The product may fall and cause personal injury or death.



If you do not use the product for a long period of time, disconnect the power cord from the power outlet.

- Otherwise, this may result in overheating or fire due to dust, and may result in fire due to electric shock or leakage.



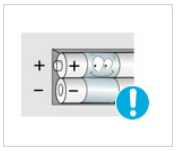
Do not place any heavy items or toys or confectionery, such as cookies etc. that may attract the attentions of children onto the product.

- Your children may hang onto the product causing it to fall and this may result in personal injury or death.



Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



When replacing the battery, insert it with right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



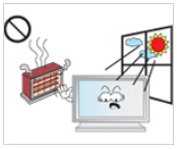
Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



The batteries (and rechargeable batteries) is not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling purposes as the consumer.

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.



Do not place the product in a location exposed to direct sunlight or near any heat such as a fire or heater.

- This may reduce the lifetime of the product, and may result in fire.



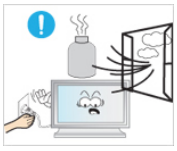
Do not drop any objects onto the product or cause any impact to the product.

- Otherwise, this may result in electric shock or fire.



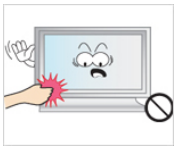
Do not use a humidifier or kitchen table near the product.

- Otherwise, this may result in electric shock or fire.



When there is a gas leak, do not touch the product or the power plug but ventilate immediately.

- If a spark occurs, it may cause an explosion or fire.



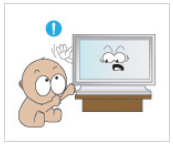
If the product has been turned on for a long time, the display panel becomes hot. Do not touch it.

- Keep the small accessories in a location out of the reach of children.



Be careful when adjusting the angle of the product or the height of the stand.

- This may result in personal injury as your hand or fingers may become caught.
- Also, if you tilt the product too far, it may fall and cause personal injury.



Do not install the product in a location low enough for children to reach.

- Otherwise, it may fall and result in personal injury.
- Since the front part of the product is heavy, install the product on a level and stable surface.



Do not put any heavy objects on the product.

- This may result in personal injury and/or damage to the product.

Introduction

-- 400UX --

Package Contents

Note

Please make sure the following items are included with your LCD Display.

If any items are missing, contact your dealer.

Contact a local dealer to buy optional items.

Note

This stand is not for the Floor Standing Type.

Unpacking



LCD Display

Manuals



Quick Setup Guide



Warranty Card

(Not available in all locations)



User's Guide

Cables



D-Sub Cable



Power Cord

Others



Remote Control



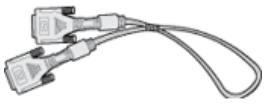
Batteries (AAA X 2)

(Not available in all locations)

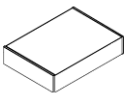


BNC to RCA Adaptor Jack

Sold separately



DVI Cable



Wall Mount KIT



Semi Stand KIT



BNC Cable

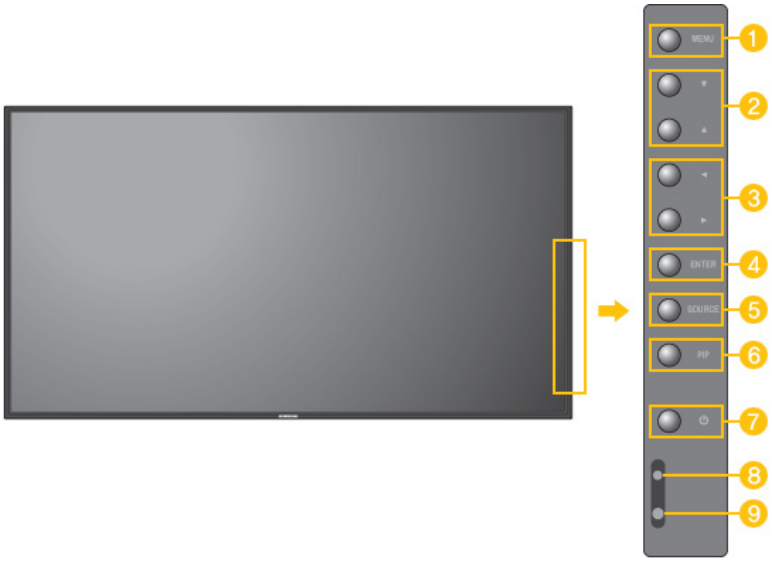
Calibrater

For more information on the use of the calibrater, see Natural Color Expert Help.

-- 400UX --

Your LCD Display

Front



1 *MENU button [MENU]*

Opens the on-screen menu and exits from the menu. Also use to exit the OSD menu or return to the previous menu.

2 *Navigate buttons (Up-Down buttons)*

Moves from one menu item to another vertically or adjusts selected menu values.

3 *Adjust buttons (Left-Right buttons) / Volume buttons*

Moves from one menu item to another horizontally or adjusts selected menu values. When OSD is not on the screen, push the button to adjust volume.

4 *ENTER button [ENTER]*

Activates a highlighted menu item.

5 *SOURCE button [SOURCE]*

Switches from PC mode to Video mode. Changing the source is only allowed for external devices that are connected to the LCD Display at the time.

[**PC**] → [**BNC**] → [**DVI**] → [**AV**] → [**S-Video**] → [**Component**] → [**HDMI**]

>> Click here to see an animation clip

6 *PIP*

Push the PIP button to turn the PIP screen On / Off.

More than one PIP cannot overlap on screen as BNC and the component use the same terminal.

>> Click here to see an animation clip

- **PC**

 AV / **S-Video** / **Component** / **HDMI** Mode

- **BNC**

 AV / **S-Video** / **HDMI** Mode

- **DVI**

 AV / **S-Video** / **Component** Mode

- **AV** / **S-Video**

 PC / **BNC** / **DVI** Mode

- **Component**

 PC / **DVI** Mode

- **HDMI**

 PC / **BNC** Mode

7 *Power button [⏻]*

Use this button for turning the LCD Display on and off.

8 *Power indicator*

Shows PowerSaver mode by blinking green

Note

See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your LCD Display OFF when it is not needed or when leaving it unattended for long periods.

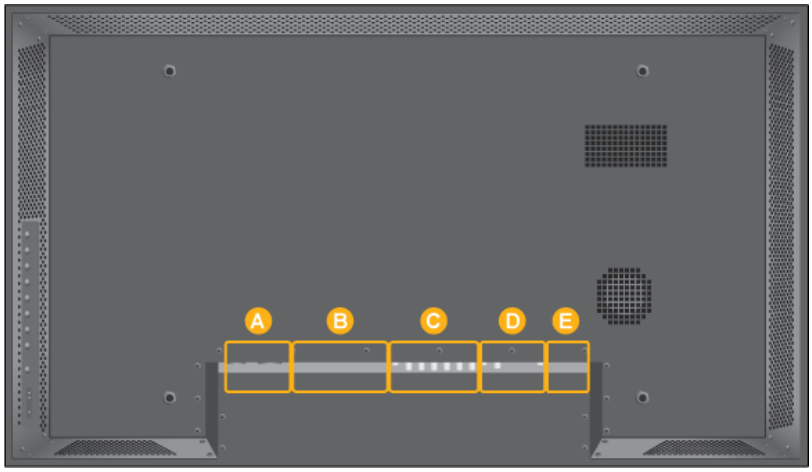
9 *Remote Control Sensor*

Aim the remote control towards this spot on the LCD Display.

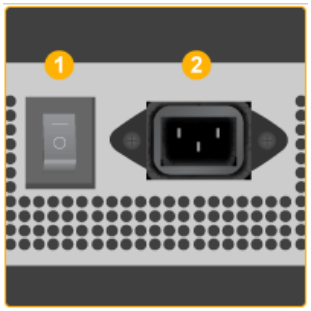
Rear

Note

For detailed information concerning cable connections, refer to Connecting Cables under Setup. The LCD Display 's configuration at the back may vary slightly depending on the LCD Display model.



A



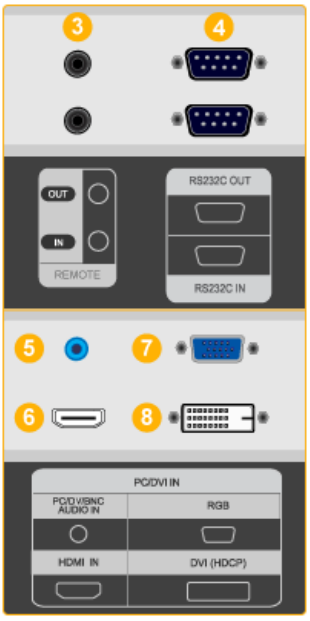
1 *POWER S/W ON [|] / OFF [O]*

Switches the LCD Display On/Off.

2 *POWER IN*

The power cord plugs into the LCD Display and the wall plug.

B



3 *REMOTE OUT/IN*

You can use a wired remote control by connecting it to your LCD Display.

4 *RS232C OUT/IN (RS232C Serial PORT)*

MDC(Multiple Display Control) Program Port

5 *DVI / PC / HDMI IN [PC/DVI/BNC AUDIO IN] (PC/DVI/BNC/HDMI Audio Connection Terminal (Input))*

6 *DVI / PC / HDMI IN [HDMI]*

Connect the HDMI terminal at the back of your LCD Display to the HDMI terminal of your digital output device using a HDMI cable.

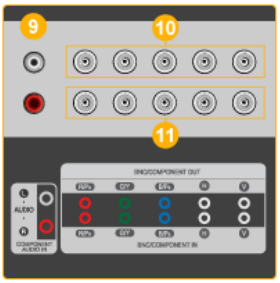
7 *DVI / PC / HDMI IN [RGB](PC Video Connection Terminal)*

Using a D-Sub Cable (15 pin D-Sub) - PC mode (Analog PC)

8 *DVI / PC / HDMI IN [DVI(HDCP)] (PC Video Connection Terminal)*

Using a DVI Cable (DVI-D to DVI-D) - DVI mode (Digital PC)

C



9 *COMPONENT AUDIO IN [L-AUDIO-R] (Component Audio Connection Terminal (Input))*

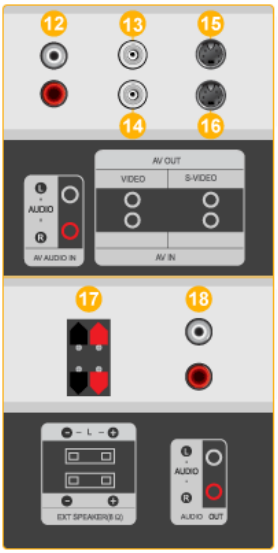
10 *BNC/COMPONENT OUT [R/PR, G/Y, B/PB, H, V] (BNC/Component Connection Terminal (Output))*

BNC (Analog PC) Connection: connecting the R, G, B, H, V ports

Component Connection: connecting the PR, Y, PB ports

11 *BNC/COMPONENT IN [R/PR, G/Y, B/PB, H, V](BNC/Component Connection Terminal (Input))*

D



12 *AV AUDIO IN [L-AUDIO-R] (LCD Display Audio Connection Terminal (Input))*

13 *AV OUT [VIDEO](VIDEO Connection Terminal)*

AV mode (Output)

14 *AV IN [VIDEO](VIDEO Connection Terminal) (Input)*

15 *AV OUT [S-VIDEO] (S-VIDEO Connection Terminal)*

S-VIDEO mode (Output)

16 *AV IN [S-VIDEO](S-VIDEO Connection Terminal) (Input)*

17 *EXT SPEAKER(8 Ω)[- - L - +, - - R - +] (EXT Speaker Connection Terminal)*

18 *AUDIO OUT [L-AUDIO-R] (LCD Display Audio Connection Terminal (Output))AUDIO OUT is the terminal for sound output of PC, DVI or BNC.*

E



19 *USB(USB Connection Terminal)*

Keyboard / Mouse, Mass Storage Device Compatible.

Note

The number of LCD Displays that can be connected to loopout may differ depending on the cables, signal source etc. With cables where there is no degradation or signal source, up to ten LCD Displays can be connected.

Note

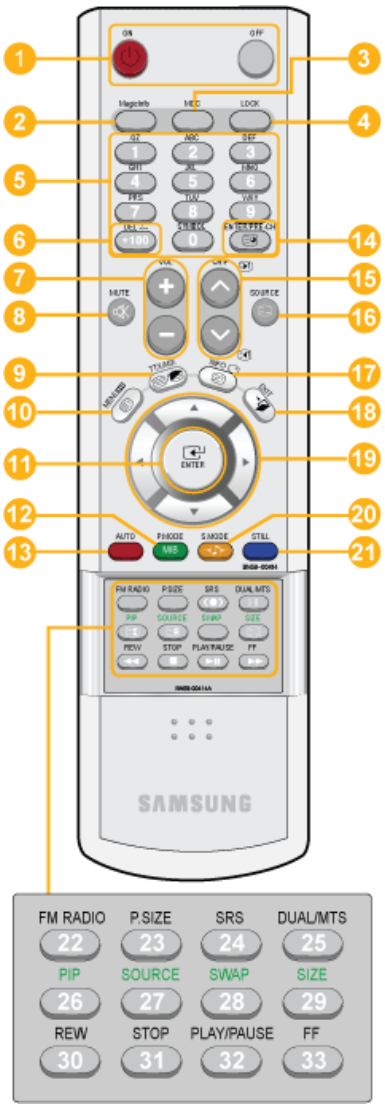
See Connecting Cables for further information regarding cable connections.

-- 400UX --

Remote Control

Note

The performance of the remote control may be affected by a TV or other electronic device operating near the LCD Display , causing a malfunction due to interference with the frequency.



1. ON / OFF
2. MagicInfo
3. MDC
4. LOCK
5. MagicInfo buttons
6. +100 DEL -/--
7. VOL
8. MUTE
9. TTX/MIX
10. MENU
11. ENTER
12. M/B P.MODE
13. AUTO
14. ENTER/PRE-CH
15. CH/P
16. SOURCE
17. INFO
18. EXIT
19. Up-Down Left-Right buttons
20. S.MODE
21. STILL
22. FM RADIO
23. P.SIZE
24. SRS
25. DUAL/MTS
26. *PIP*
27. *SOURCE*
28. *SWAP*
29. *SIZE*
30. REW
31. STOP
32. PLAY/PAUSE
33. FF

1. ON / OFF	Turns the LCD Display On/Off.
2. MagicInfo	MagicInfo Quick Launch Button.

3. MDC	MDC Quick Launch Button.
4. LOCK	Activates or deactivates all function keys on both the remote control and the LCD Display except for the Power and LOCK buttons.
5. MagicInfo buttons	MagicInfo Quick Launch Button. • Alphanumeric: Used to enter the Internet address. • DEL: Functions as the backspace. • SYMBOL: Used to enter the symbols. (.O_-) • ENTER: Used to enter values.
6. +100 DEL -/--	Press to select channels over 100. For example, to select channel 121, press "+100", then press "2" and "1". - This fuction does not work for this LCD Display.
7. VOL	Adjusts the audio volume.
8. MUTE	Pauses (mutes) the audio output temporarily. This is displayed on the lower left corner of the screen. The audio resumes if MUTE or - VOL + is pressed in the Mute mode.
9. TTX/MIX	TV channels provide text information services via teletext. - This fuction does not work for this LCD Display.
10. MENU	Opens the on-screen menu and exits from the menu screen or closes the screen adjustment menu.
11. ENTER	Activates a highlighted menu item.
12. M/B P.MODE	When you press this button, current picture mode is displayed on the lower center of the screen. ***AV / S-Video / Component** : P.MODE* The LCD Display has four automatic picture settings that are preset at the factory. Then push button again to circle through available preconfigured modes. (**Dynamic → Standard → Movie → Custom**) ***PC / DVI / BNC** : M/B **(MagicBright)*** **MagicBright** is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Then push button again to circle through available preconfigured modes. (**Entertain → Internet → Text → Custom**)
13. AUTO	Adjusts the screen display automatically in **PC** mode. By changing the resolution in the control panel, auto function is performed.
14. ENTER/PRE-CH	Returns to the immediately previous channel. - This fuction does not work for this LCD Display.
15. ∨CH/P∧	In **TV** mode, selects TV channels.

- This fuction does not work for this LCD Display.

16. SOURCE — Changes the video source.

17. INFO — The current picture information is displayed in the top left corner of the screen.

18. EXIT — Exits from the menu screen.

19. Up-Down Left-Right buttons — Moves from one menu item to another horizontally, vertically or adjusts selected menu values.

20. S.MODE — When pressing this button, the current mode is displayed at the bottom centre of the screen. The LCD Display has a built-in high fidelity stereo amplifier. Then press the button again to circle through available preconfigured modes. (**Standard → Music → Movie → Speech → Custom**)

21. STILL — Press the button once to freeze the screen. Press it again to unfreeze.

22. FM RADIO — Turns the FM Radio on/off. In **PC/DVI** mode, sets the SOUND to FM Radio. In general Video mode, selects FM Radio, and turns off the screen. In areas where the signal is weak, noise may occur during FM radio broadcasts.

- This fuction does not work for this LCD Display.

23. P.SIZE — Press to change the screen size.

24. SRS — SRS

25. DUAL/MTS — *DUAL-*

STEREO/MONO, DUAL l / DUAL ll and MONO/NICAM MONO/NICAM STEREO can be operated depending on the broadcasting type by using the DUAL button on the remote control while watching TV.

MTS-

You can select MTS (Multichannel Television Stereo) mode.

	Audio Type	MTS/S_Mode	Default
FM Stereo	Mono	Mono	Manual Change
	Stereo	Mono ↔ Stereo	
	SAP	Mono ↔ SAP	Mono

- This fuction does not work for this LCD Display.

26. *PIP* — Every time you press the button, a PIP screen appears.

27. *SOURCE* — Changes the source of the PIP window signal.

28. *SWAP* — Swaps the contents of the PIP and main image. The image in the PIP window will appear on the main screen, and the main screen image will appear in the PIP window.

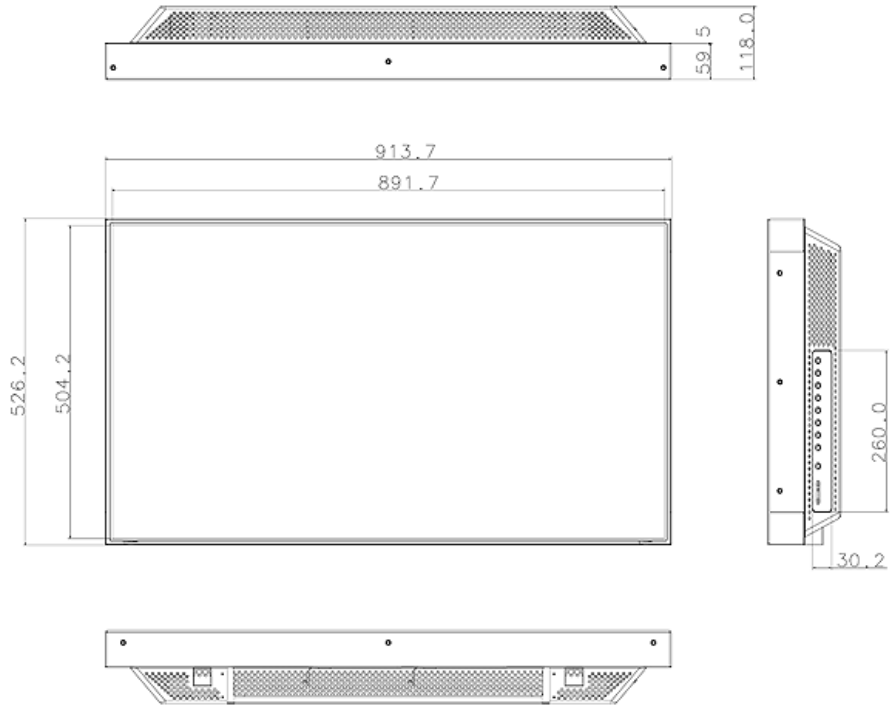
29. *SIZE*	Switches the PIP Picture Size.
30. ◀◀ REW	Rewind
31. ■ STOP	Stop
32. ▶II PLAY / PAUSE	Play/Pause
33. ▶▶ FF	Fast forward

-- 400UX --

Mechanical Layout

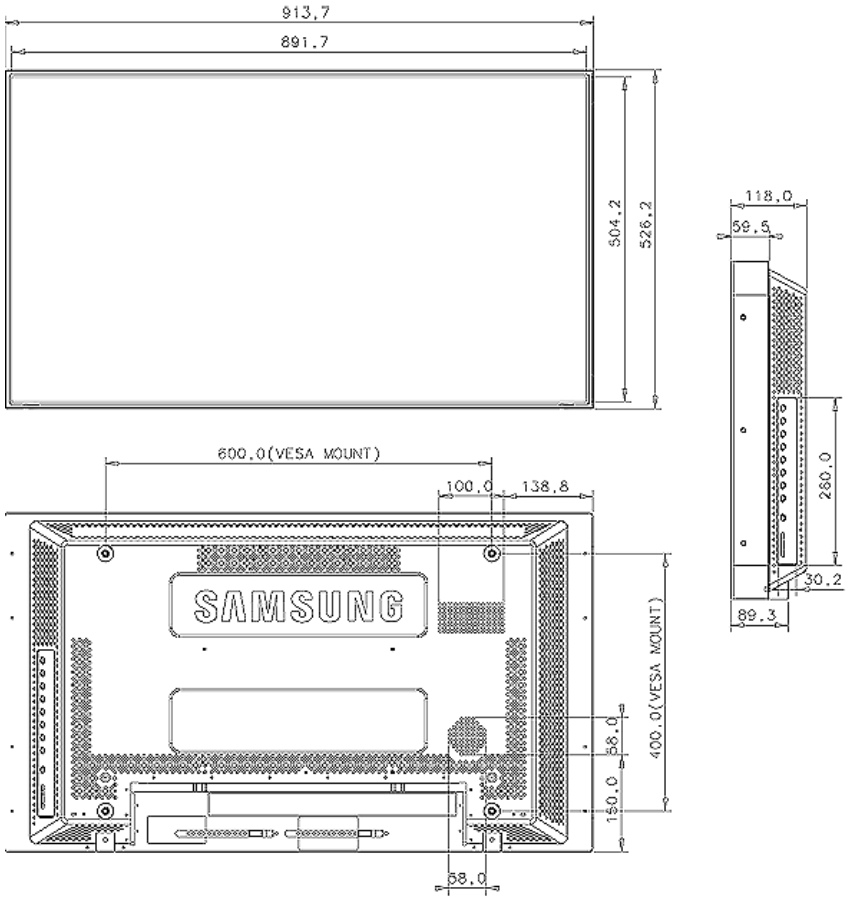
Mechanical Layout

NETWORK MODEL SIZE



LCD Display Head

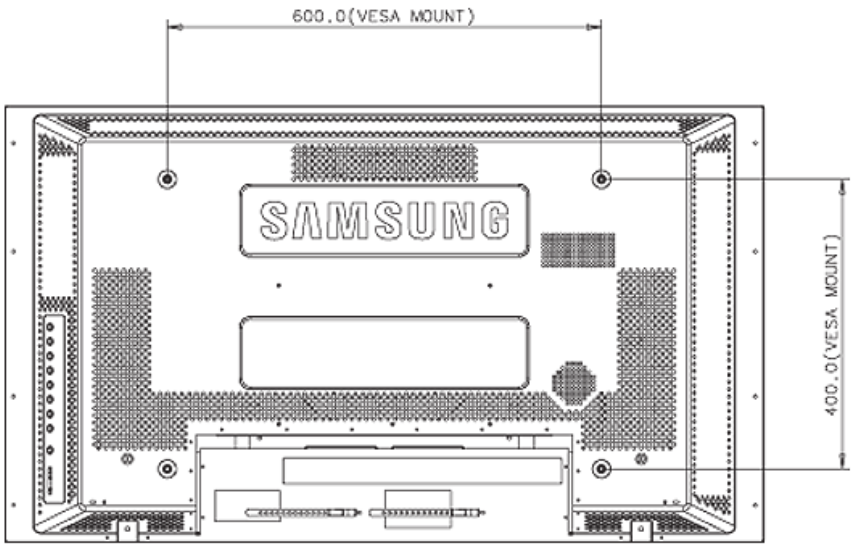
NETWORK MODEL SIZE



Installation VESA Bracket

- When installing VESA, make sure to comply with the international VESA standards.
- Purchasing VESA Bracket and Installation Information : Please contact your nearest SAMSUNG Distributor to place an order. After your order is placed, installation professionals will visit you and install the bracket.
- At least 2 persons are needed in order to move the LCD Display.
- SAMSUNG is not responsible for any product damage or any injury caused by installation at customer's discretion.

Dimensions



Notice

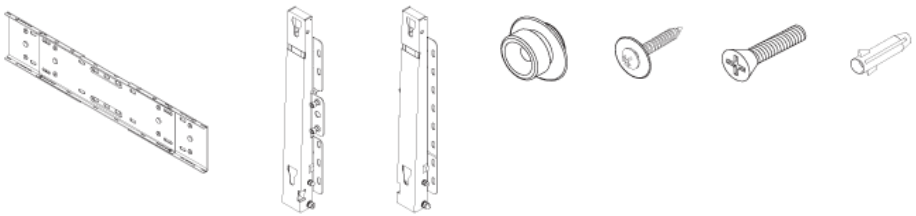
For securing the bracket on a wall, use only machine screws of 6 mm diameter and 8 to 12 mm length.

Wall Bracket Installation

- Contact a technician for installing the wall bracket.
- SAMSUNG Electronics is not responsible for any damages to the product or harm to customers when the installation is done by the customer.
- This product is for installing on cement walls. The product may not stay in place when installed on plaster or wood.

Components

Only use the components and accessories shipped with the product.



Wall Bracket(1)	Hinge(Left 1, Right 1)	Plastic Hanger (4)	Screw (A)(11)	Screw(B) (4)	Anchor (11)	

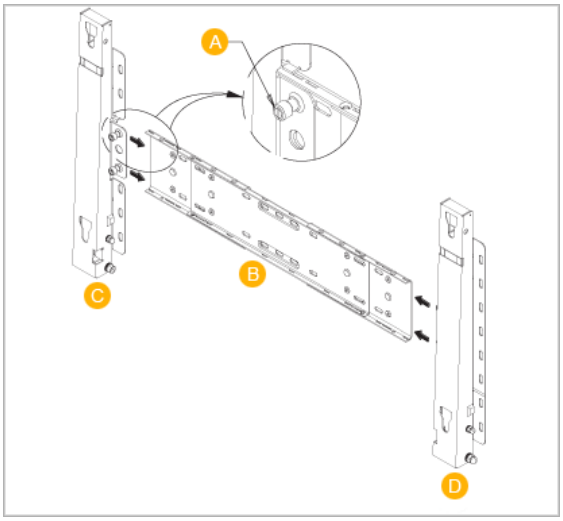
Wall Bracket Assembly

Note

There are two hinges(left and right). Use the correct one.

1. Insert and tighten the Captive Screw in the direction of the arrow.

 When done, mount the wall bracket on the wall.



There are two hinges(left and right). Use the correct one.

A - Captive Screw

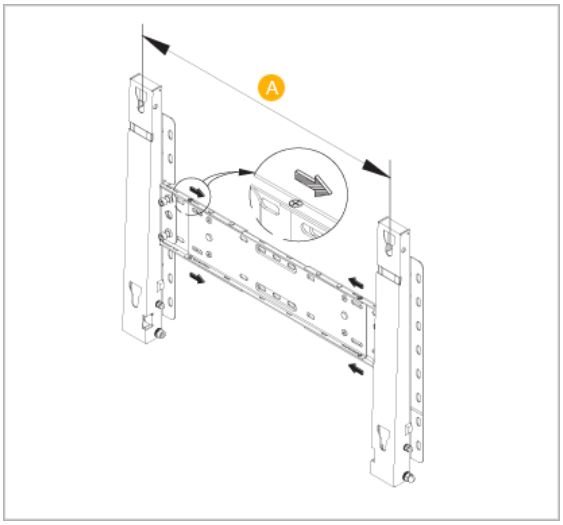
B - Wall Bracket

C - Hinge (Left)

D - Hinge (Right)

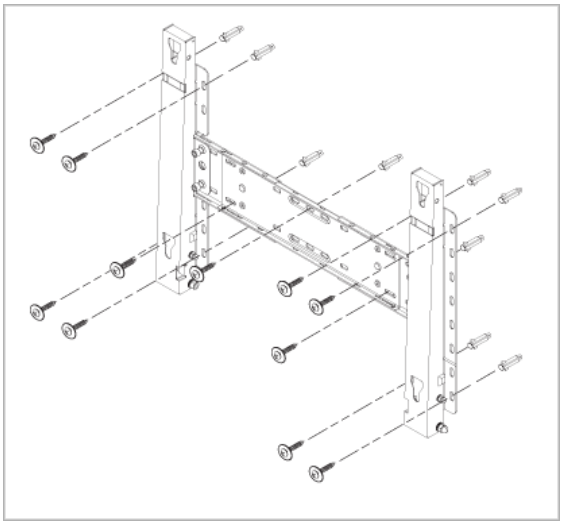
2. Before drilling into the wall, check if the length between the two locking holes at the back of the product is correct.

 If the length is too short or long, loosen all or some of the 4screws on the wall bracket to adjust the length.



A - Length between the two locking holes

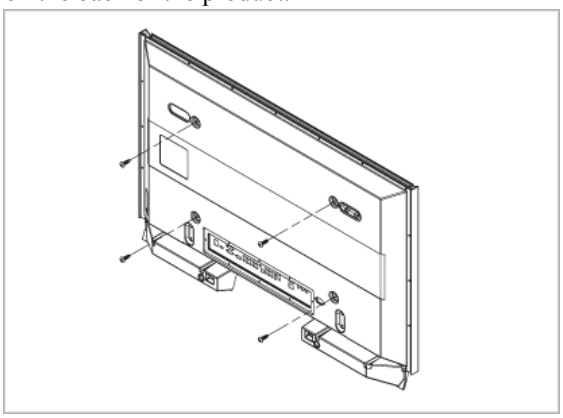
3. Check the installation diagram and mark the drill points on the wall. Use the 5.0 mm bit to drill holes deeper than 35 mm. Fix each anchor in the corresponding hole. Match each of the brackets and hinge holes to the corresponding anchor holes and insert and tighten the 11 screws A.



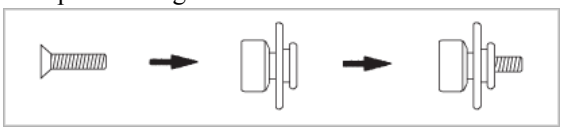
To mount the product on the wall bracket

The shape of the product may vary depending on the model. (The assemblies of the plastic hanger and the screw are the same)

1. Remove the 4 screws on the back of the product.



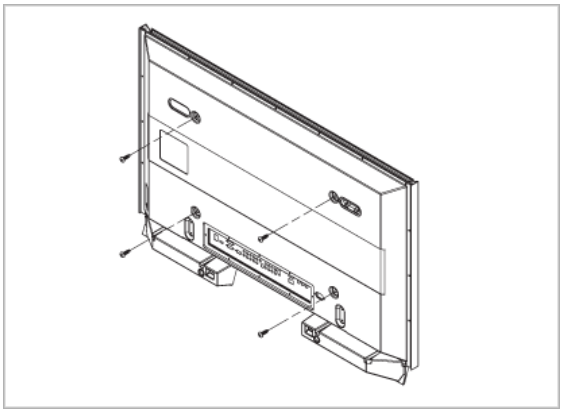
2. Insert the screw B into the plastic hanger.



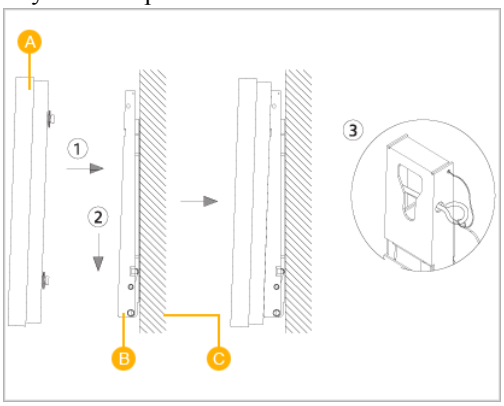
Notice

- Mount the product on the wall bracket and make sure it is properly fixed to the left and right plastic hangers.
- Be careful when installing the product on the bracket as fingers can be caught in the holes.
- Make sure the wall bracket is securely fixed to the wall, or the product may not stay in place after installation.

3. Tighten the 4 screws in step 2 (plastic hanger + screw B)to the rear holes of the product.



4. Remove safety pin (3) and insert the 4 product holders into the corresponding bracket holes (1). Then place the product(2) so that it is firmly fixed to the bracket. Make sure to re-insert and tighten the safety pin (3) to securely hold the product to the bracket.



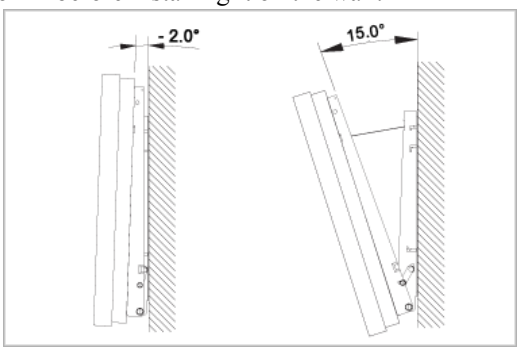
A - LCD Display

B - Wall Bracket

C - Wall

Wall Bracket Angle Adjustment

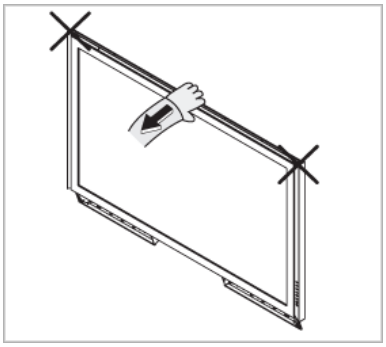
Adjust the bracket angle to -2° before installing it on the wall.



1. Fix the product to the wall bracket.

2. Hold the product at the top in the center and pull it forward (direction of the arrow) to adjust the angle.

3. You can adjust the bracket angle between -2° and 15°.



Make sure to use the top center, and not the leftor the right side of the product to adjust the angle.

-- 460UX --

Package Contents

Note

Please make sure the following items are included with your LCD Display.

If any items are missing, contact your dealer.

Contact a local dealer to buy optional items.

Note

This stand is not for the Floor Standing Type.

Unpacking



LCD Display

Manuals



Quick Setup Guide



Warranty Card

(Not available in all locations)



User's Guide

Cables



D-Sub Cable



Power Cord

Others



Remote Control



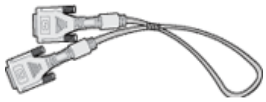
Batteries (AAA X 2)

(Not available in all locations)

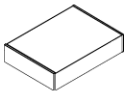


BNC to RCA Adaptor Jack

Sold separately



DVI Cable



Wall Mount KIT

Calibrater

For more information on the use of the calibrater, see Natural Color Expert Help.



Semi Stand KIT

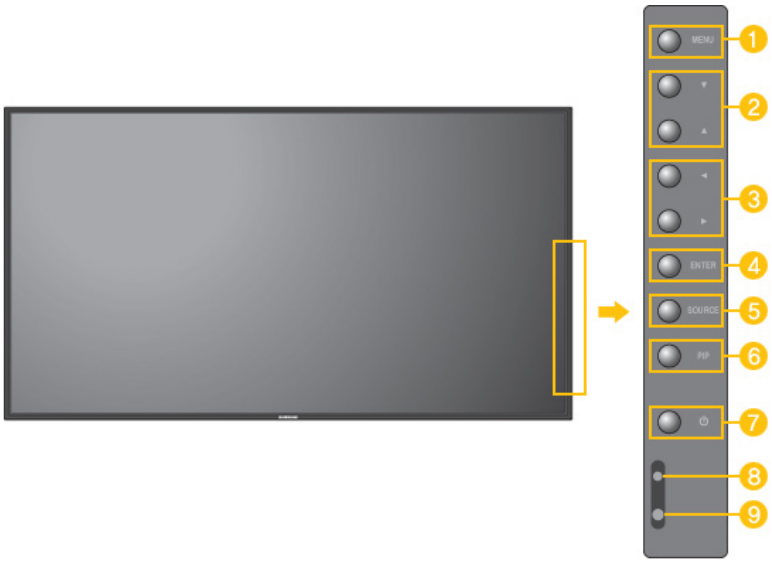


BNC Cable

-- 460UX --

Your LCD Display

Front



1 *MENU button [MENU]*

Opens the on-screen menu and exits from the menu. Also use to exit the OSD menu or return to the previous menu.

2 *Navigate buttons (Up-Down buttons)*

Moves from one menu item to another vertically or adjusts selected menu values.

3 *Adjust buttons (Left-Right buttons) / Volume buttons*

Moves from one menu item to another horizontally or adjusts selected menu values. When OSD is not on the screen, push the button to adjust volume.

4 *ENTER button [ENTER]*

Activates a highlighted menu item.

5 *SOURCE button [SOURCE]*

Switches from PC mode to Video mode. Changing the source is only allowed for external devices that are connected to the LCD Display at the time.

[PC] → **[BNC]** → **[DVI]** → **[AV]** → **[S-Video]** → **[Component]** → **[HDMI]**

>> Click here to see an animation clip

6 *PIP*

Push the PIP button to turn the PIP screen On / Off.

More than one PIP cannot overlap on screen as BNC and the component use the same terminal.

>> Click here to see an animation clip

- **PC**

AV / **S-Video** / **Component** / **HDMI** Mode

- **BNC**

 AV / **S-Video** / **HDMI** Mode

- **DVI**

 AV / **S-Video** / **Component** Mode

- **AV** / **S-Video**

 PC / **BNC** / **DVI** Mode

- **Component**

 PC / **DVI** Mode

- **HDMI**

 PC / **BNC** Mode

7 *Power button [⏻]*

Use this button for turning the LCD Display on and off.

8 *Power indicator*

Shows PowerSaver mode by blinking green

Note

See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your LCD Display OFF when it is not needed or when leaving it unattended for long periods.

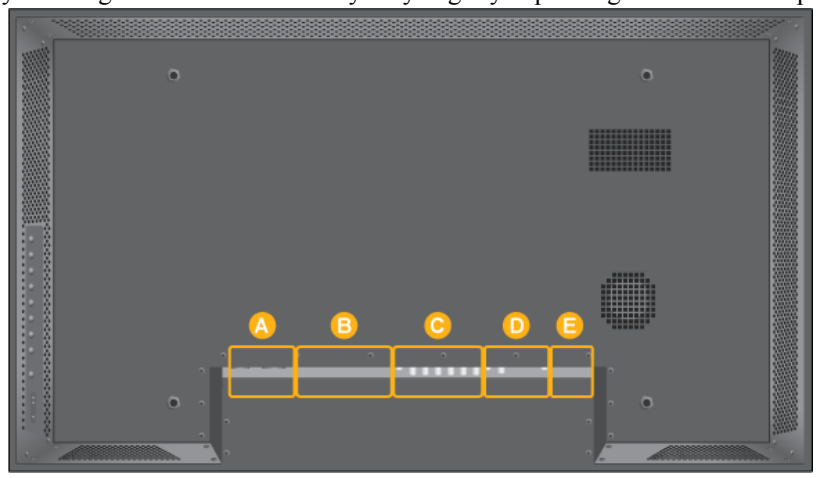
9 *Remote Control Sensor*

Aim the remote control towards this spot on the LCD Display.

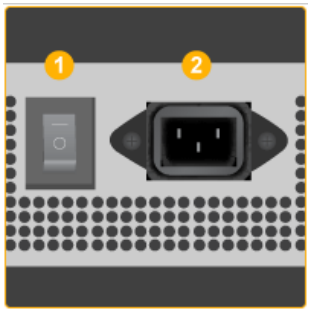
Rear

Note

For detailed information concerning cable connections, refer to Connecting Cables under Setup. The LCD Display 's configuration at the back may vary slightly depending on the LCD Display model.



A



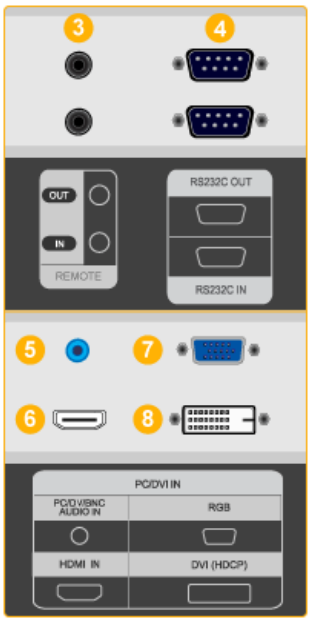
1 *POWER S/W ON [|] / OFF [O]*

Switches the LCD Display On/Off.

2 *POWER IN*

The power cord plugs into the LCD Display and the wall plug.

B



3 *REMOTE OUT/IN*

You can use a wired remote control by connecting it to your LCD Display.

4 *RS232C OUT/IN (RS232C Serial PORT)*

MDC(Multiple Display Control) Program Port

5 *DVI / PC / HDMI IN [PC/DVI/BNC AUDIO IN] (PC/DVI/BNC/HDMI Audio Connection Terminal (Input))*

6 *DVI / PC / HDMI IN [HDMI]*

Connect the HDMI terminal at the back of your LCD Display to the HDMI terminal of your digital output device using a HDMI cable.

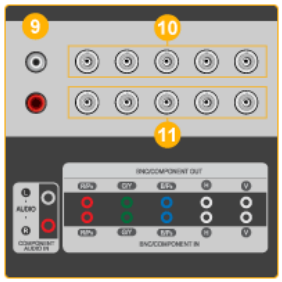
7 *DVI / PC / HDMI IN [RGB](PC Video Connection Terminal)*

Using a D-Sub Cable (15 pin D-Sub) - PC mode (Analog PC)

8 *DVI / PC / HDMI IN [DVI(HDCP)] (PC Video Connection Terminal)*

Using a DVI Cable (DVI-D to DVI-D) - DVI mode (Digital PC)

C



9 *COMPONENT AUDIO IN [L-AUDIO-R] (Component Audio Connection Terminal (Input))*

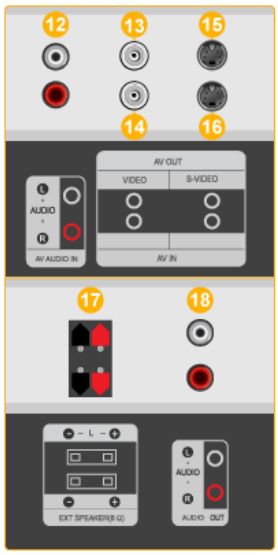
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E



19 *USB(USB Connection Terminal)*

Keyboard / Mouse, Mass Storage Device Compatible.

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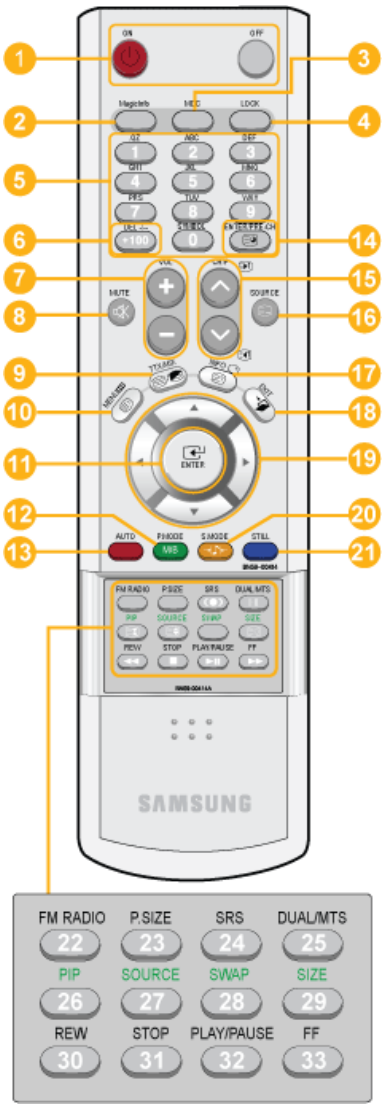
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-- 460UX --

Remote Control

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10. MENU	Opens the on-screen menu and exits from the menu screen or closes the screen adjustment menu.
11. ENTER	Activates a highlighted menu item.
12. M/B P.MODE	When you press this button, current picture mode is displayed on the lower center of the screen. ***AV / S-Video / Component** : P.MODE* The LCD Display has four automatic picture settings that are preset at the factory. Then push button again to circle through available preconfigured modes. (**Dynamic → Standard → Movie → Custom**) ***PC / DVI / BNC** : M/B **(MagicBright)*** **MagicBright** is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Then push button again to circle through available preconfigured modes. (**Entertain → Internet → Text → Custom**)
13. AUTO	Adjusts the screen display automatically in **PC** mode. By changing the resolution in the control panel, auto function is performed.
14. ENTER/PRE-CH	Returns to the immediately previous channel. - This fuction does not work for this LCD Display.
15. ∨CH/P∧	In **TV** mode, selects TV channels.

- This fuction does not work for this LCD Display.

16. SOURCE — Changes the video source.

17. INFO — The current picture information is displayed in the top left corner of the screen.

18. EXIT — Exits from the menu screen.

19. Up-Down Left-Right buttons — Moves from one menu item to another horizontally, vertically or adjusts selected menu values.

20. S.MODE — When pressing this button, the current mode is displayed at the bottom centre of the screen. The LCD Display has a built-in high fidelity stereo amplifier. Then press the button again to circle through available preconfigured modes. (**Standard → Music → Movie → Speech → Custom**)

21. STILL — Press the button once to freeze the screen. Press it again to unfreeze.

22. FM RADIO — Turns the FM Radio on/off. In **PC/DVI** mode, sets the SOUND to FM Radio. In general Video mode, selects FM Radio, and turns off the screen. In areas where the signal is weak, noise may occur during FM radio broadcasts.

- This fuction does not work for this LCD Display.

23. P.SIZE — Press to change the screen size.

24. SRS — SRS

25. DUAL/MTS — *DUAL-*

STEREO/MONO, DUAL l / DUAL ll and MONO/NICAM MONO/NICAM STEREO can be operated depending on the broadcasting type by using the DUAL button on the remote control while watching TV.

MTS-

You can select MTS (Multichannel Television Stereo) mode.

	Audio Type	MTS/S_Mode	Default
FM Stereo	Mono	Mono	Manual Change
	Stereo	Mono ↔ Stereo	
	SAP	Mono ↔ SAP	Mono

- This fuction does not work for this LCD Display.

26. *PIP* — Every time you press the button, a PIP screen appears.

27. *SOURCE* — Changes the source of the PIP window signal.

28. *SWAP* — Swaps the contents of the PIP and main image. The image in the PIP window will appear on the main screen, and the main screen image will appear in the PIP window.

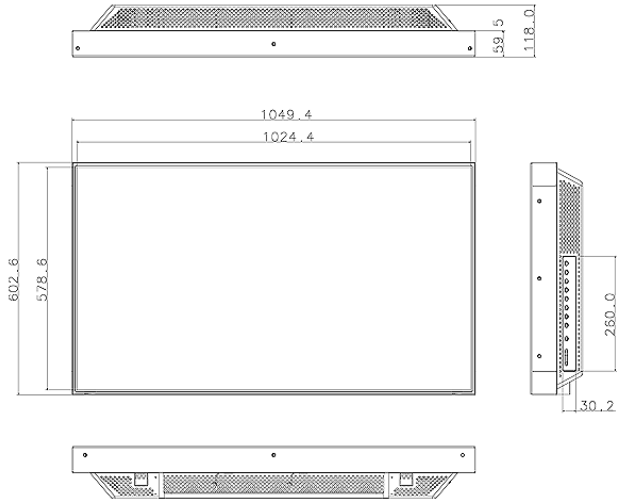
29. *SIZE*	Switches the PIP Picture Size.
30. ◀◀ REW	Rewind
31. ■ STOP	Stop
32. ▶II PLAY / PAUSE	Play/Pause
33. ▶▶ FF	Fast forward

-- 460UX --

Mechanical Layout

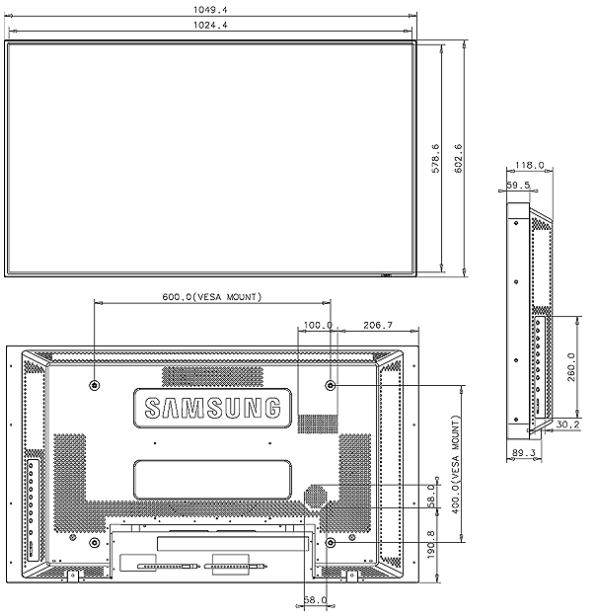
Mechanical Layout

NETWORK MODEL SIZE



LCD Display Head

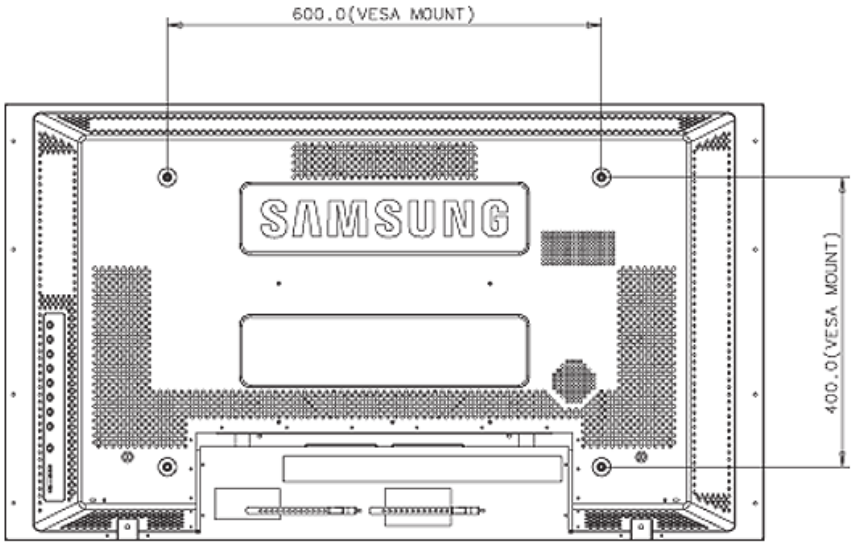
NETWORK MODEL SIZE



Installation VESA Bracket

- When installing VESA, make sure to comply with the international VESA standards.
- Purchasing VESA Bracket and Installation Information : Please contact your nearest SAMSUNG Distributor to place an order. After your order is placed, installation professionals will visit you and install the bracket.
- At least 2 persons are needed in order to move the LCD Display.
- SAMSUNG is not responsible for any product damage or any injury caused by installation at customer's discretion.

Dimensions



Notice

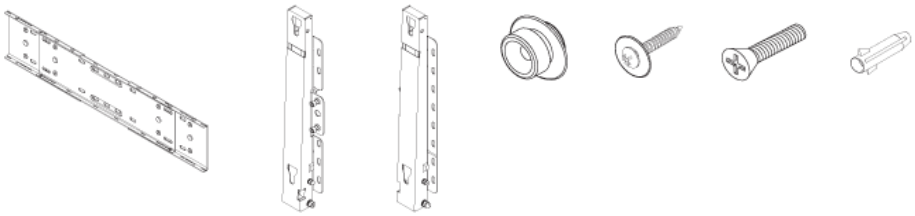
For securing the bracket on a wall, use only machine screws of 6 mm diameter and 8 to 12 mm length.

Wall Bracket Installation

- Contact a technician for installing the wall bracket.
- SAMSUNG Electronics is not responsible for any damages to the product or harm to customers when the installation is done by the customer.
- This product is for installing on cement walls. The product may not stay in place when installed on plaster or wood.

Components

Only use the components and accessories shipped with the product.



Wall Bracket(1)	Hinge(Left 1, Right 1)	Plastic Hanger (4)	Screw (A)(11)	Screw(B) (4)	Anchor (11)

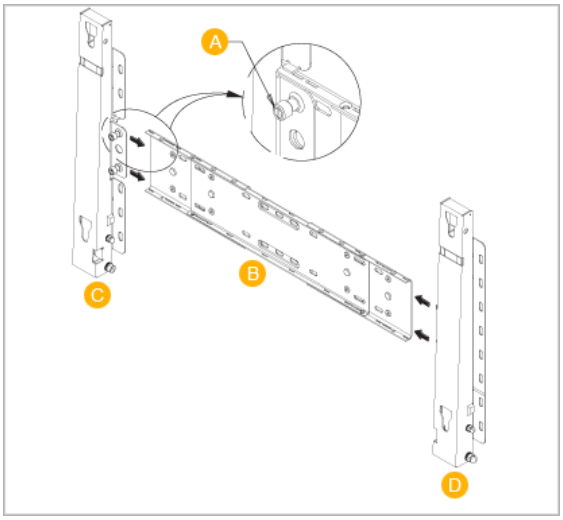
Wall Bracket Assembly

Note

There are two hinges(left and right). Use the correct one.

1. Insert and tighten the Captive Screw in the direction of the arrow.

 When done, mount the wall bracket on the wall.

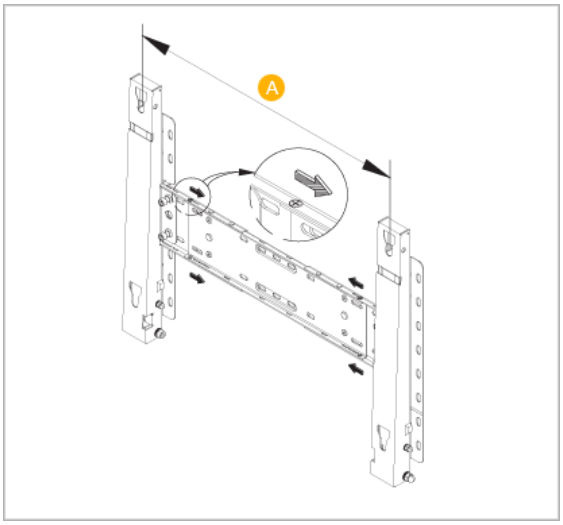


 There are two hinges(left and right). Use the correct one.

 A - Captive Screw
 B - Wall Bracket
 C - Hinge (Left)
 D - Hinge (Right)

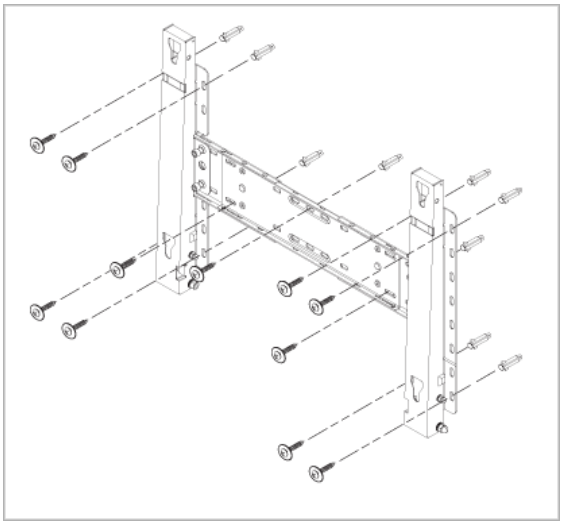
2. Before drilling into the wall, check if the length between the two locking holes at the back of the product is correct.

 If the length is too short or long, loosen all or some of the 4screws on the wall bracket to adjust the length.



A - Length between the two locking holes

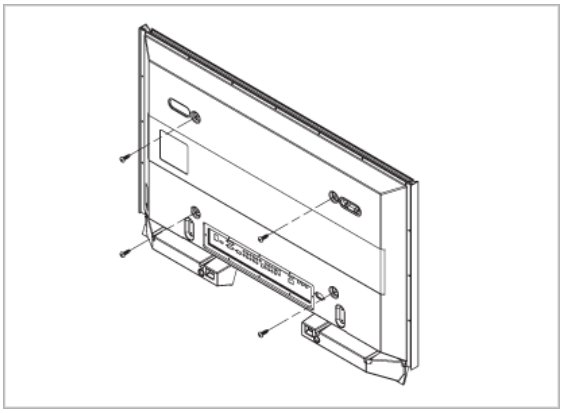
3. Check the installation diagram and mark the drill points on the wall. Use the 5.0 mm bit to drill holes deeper than 35 mm. Fix each anchor in the corresponding hole. Match each of the brackets and hinge holes to the corresponding anchor holes and insert and tighten the 11 screws A.



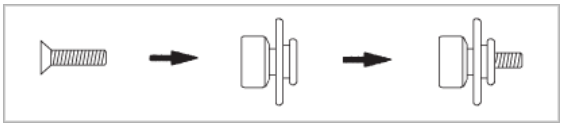
To mount the product on the wall bracket

The shape of the product may vary depending on the model. (The assemblies of the plastic hanger and the screw are the same)

1. Remove the 4 screws on the back of the product.



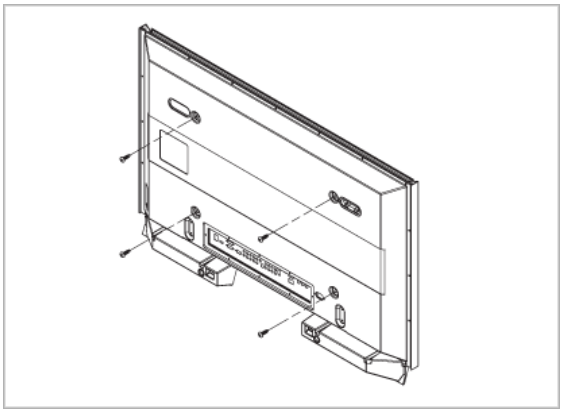
2. Insert the screw B into the plastic hanger.



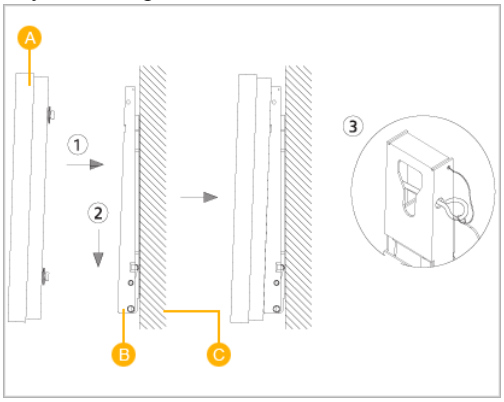
Notice

- Mount the product on the wall bracket and make sure it is properly fixed to the left and right plastic hangers.
- Be careful when installing the product on the bracket as fingers can be caught in the holes.
- Make sure the wall bracket is securely fixed to the wall, or the product may not stay in place after installation.

3. Tighten the 4 screws in step 2 (plastic hanger + screw B)to the rear holes of the product.



4. Remove safety pin (3) and insert the 4 product holders into the corresponding bracket holes (1). Then place the product(2) so that it is firmly fixed to the bracket. Make sure to re-insert and tighten the safety pin (3) to securely hold the product to the bracket.



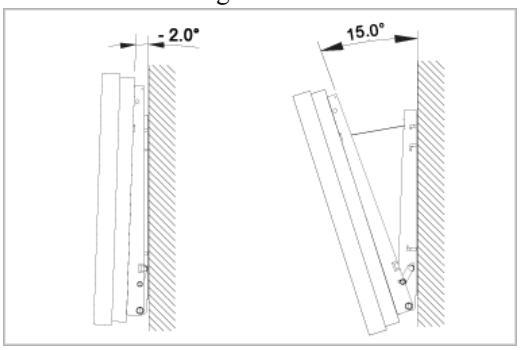
A - LCD Display

B - Wall Bracket

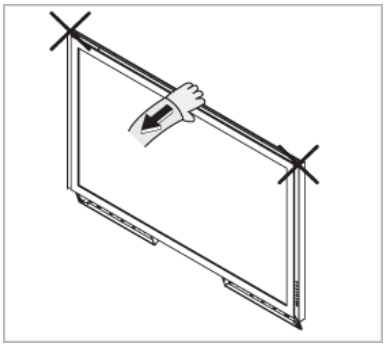
C - Wall

Wall Bracket Angle Adjustment

Adjust the bracket angle to -2° before installing it on the wall.



1. Fix the product to the wall bracket.
2. Hold the product at the top in the center and pull it forward (direction of the arrow) to adjust the angle.
3. You can adjust the bracket angle between -2° and 15°.



Make sure to use the top center, and not the leftor the right side of the product to adjust the angle.

Connections

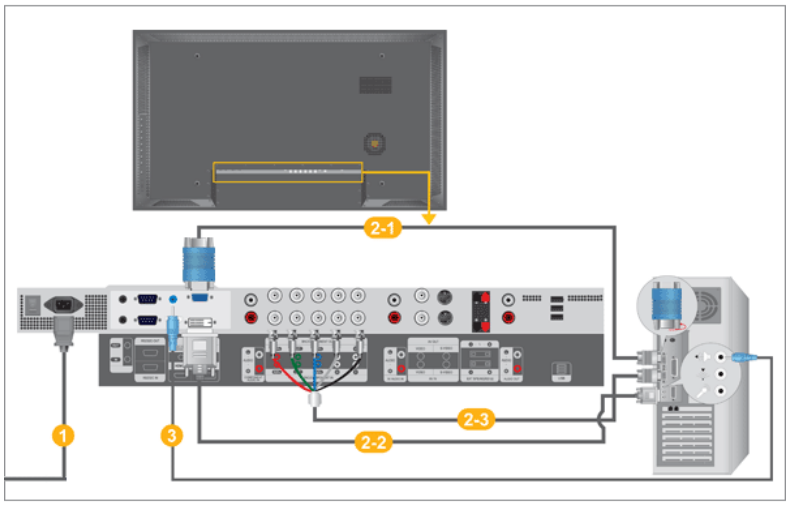
Connecting a Computer

Using a Power cord with Earth

- In the event of failure, the earth lead may cause electric shock. Make sure to wire the earth lead in correctly, before connecting the AC power. When unwiring the earth lead, make sure to disconnect the AC power in advance.

Note

AV input devices such as DVD players, VCR's or camcorders as well as your computer can be connected to the LCD Display. For detailed information on connecting AV input devices, refer to the User Controls under Adjusting Your LCD Display.



1. Connect the power cord for your LCD Display to the power port on the back of the LCD Display. Trun on the power switch.
2. There are 3 ways to connect the D-sub to your LCD Display. Choose one of the following:

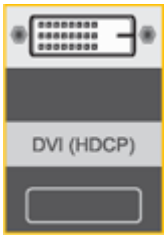
 2-1 Using the D-sub (Analog) connector on the video card.

 - Connect the D-sub to the 15-pin, RGB port on the back of your LCD Display and the 15 pin D-sub Port on the computer.



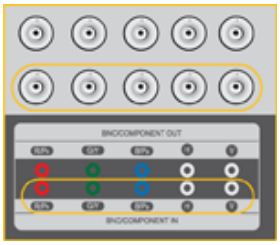
 2-2 Using the DVI (Digital) connector on the video card.

 - Connect the DVI Cable to the DVI(HDCP) port on the back of your LCD Display and the DVI port on the computer.



2-3 Using the BNC (Analog) connector on the video card.

- Connect the BNC Cable to the BNC/COMPONENT IN - R, G, B, H, V ports on the back of your LCD Display and the 15 pin D-sub Port on the computer.



3 Connect the audio cable for your LCD Display to the audio port on the back of your computer.

Note

- Turn on both your computer and the LCD Display.
- The DVI cable or BNC cable is optional.
- Contact a local SAMSUNG Electronics Service Center to buy optional items.

Connecting to Other devices

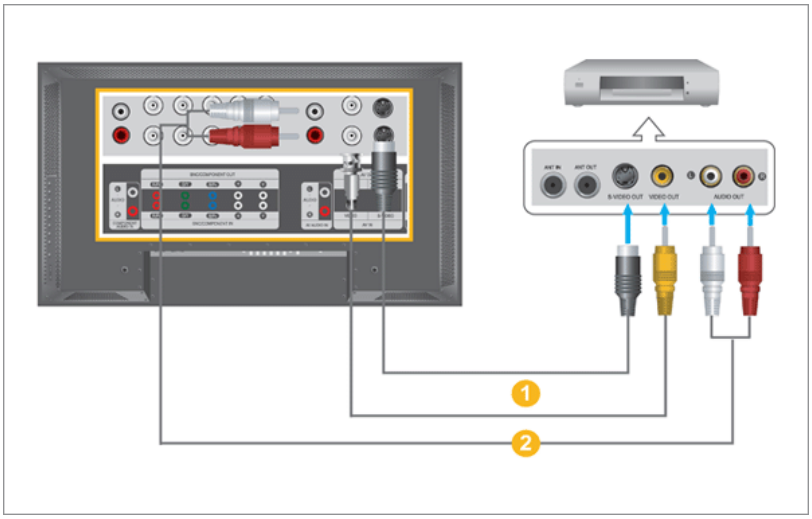
Using a Power cord with Earth

- In the event of failure, the earth lead may cause electric shock. Make sure to wire the earth lead in correctly, before connecting the AC power. When unwiring the earth lead, make sure to disconnect the AC power in advance.

Note

AV input devices such as DVD players, VCR's or camcorders as well as your computer can be connected to the LCD Display. For detailed information on connecting AV input devices, refer to the User Controls under Adjusting Your LCD Display.

Connecting a VCR

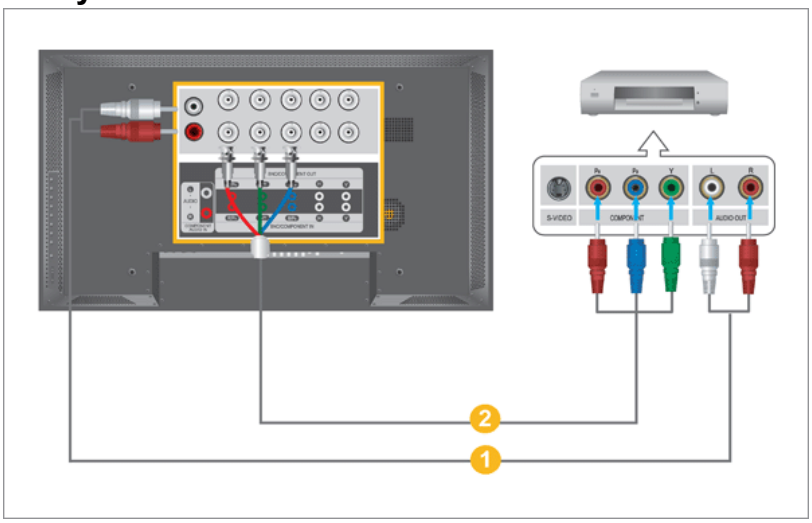


1. AV input devices such as VCRs or Camcorders are connected via the AV IN [VIDEO] or AV IN [S-VIDEO] of the LCD Display using an S-VHS or BNC cable.
2. Connect the Audio (L) and Audio (R) terminals of a VCR or Camcorders to the LCD Display 's AV AUDIO IN [L-AUDIO-R] using audio cables.

Note

- Select **AV** or **S-Video** for a connected VCR or Camcorder using the SOURCE button on the front of the LCD Display or on the remote control.
- Then, start the VCR or Camcorders with a tape inserted.
- The S-VHS or BNC cable is optional.

Connecting a DVD Player

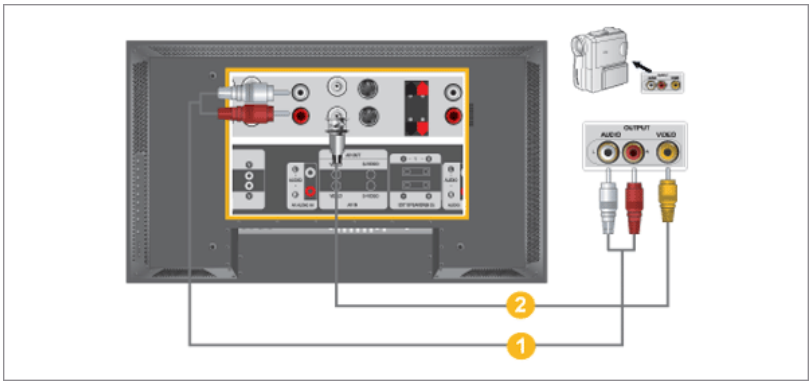


1. Connect a set of audio cables between the COMPONENT AUDIO IN [L-AUDIO-R] on the LCD Display and the AUDIO OUT jacks on the DVD player.
2. Connect a Component cable between the BNC/COMPONENT IN - PR, Y, PB port on the LCD Display and the PR, Y, PB jacks on the DVD player.

Note

- Select **Component** for the connection to a DVD player using the SOURCE button on the front of the LCD Display or on the remote control.
- Then, start the DVD Player with a DVD disc inserted.
- A component cable is optional.
- For an explanation of Component video, consult your DVD manual.

Connecting a Camcorder



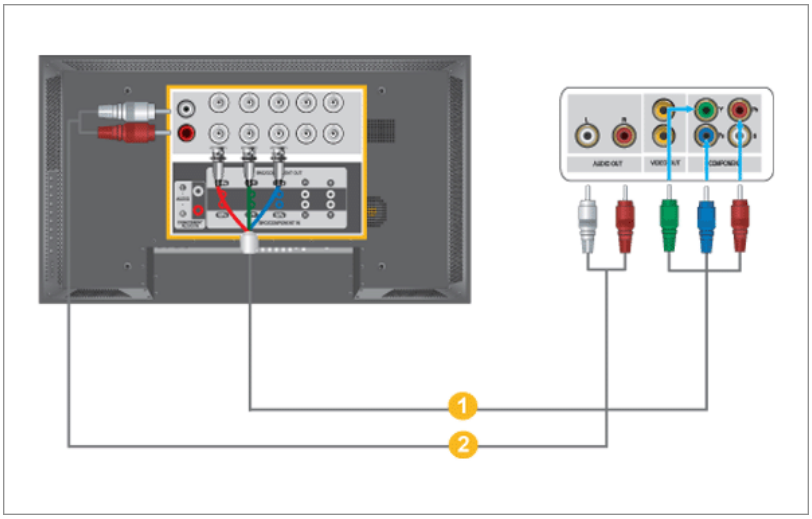
1. Locate the A/V output jacks on the camcorder. They are usually found on the side or back of the camcorder. Connect a set of audio cables between the AUDIO OUTPUT jacks on the camcorder and the AV AUDIO IN [L-AUDIO-R] on the LCD Display.
2. Connect a video cable between the VIDEO OUTPUT jack on the camcorder and the AV IN [VIDEO] on the LCD Display.

Note

- Select **AV** for the Camcorder connection using the SOURCE button on the front of the LCD Display or on the remote control.
- Then, start the Camcorders with a tape inserted.
- The audio-video cables shown here are usually included with a Camcorder.

 (If not, check your local electronics store.)
- If your camcorder is stereo, you need to connect a set of two cables.

Connecting a DTV Set Top Box

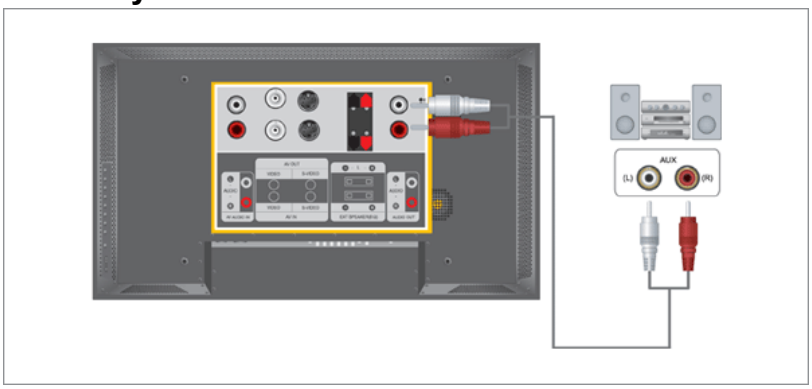


1. Connect a Component cable between the BNC / COMPONENT IN - PR, Y, PB port on the LCD Display and the PR, Y, PB jacks on the Set Top Box.
2. Connect a set of audio cables between the COMPONENT AUDIO IN [L-AUDIO-R] on the LCD Display and the AUDIO OUT jacks on the Set Top Box.

Note

- Select Component for the connection to a DTV Set Top Box using the SOURCE button on the front of the LCD Display or on the remote control.
- For an explanation of Component video, see your Set Top Box owner's manual.

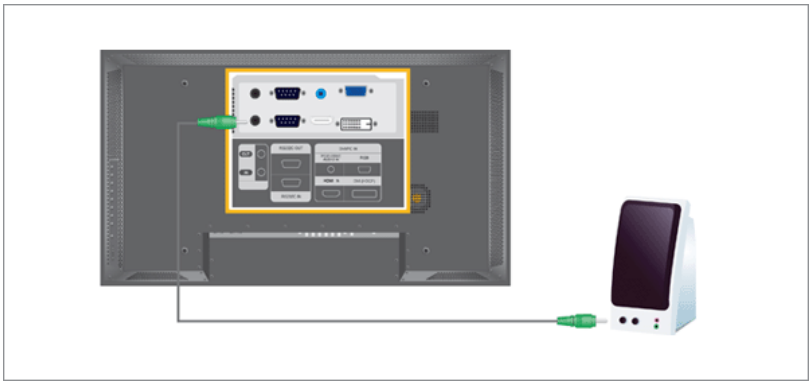
Connecting to an Audio System



Note

Connect a set of audio cables between the AUX L, R jacks on the AUDIO SYSTEM and the AUDIO OUT [L-AUDIO-R] on LCD Display.

Connecting to a Wired Remote Control



Note

- You can control your LCD Display by allowing it to receive the remote control signals of other devices through the REMOTE OUT terminal.
- You can control a device by allowing it to receive remote control signals from other devices through the REMOTE IN terminal.
- Restrictions: Available only if other devices support the wired remote control I/O terminals.

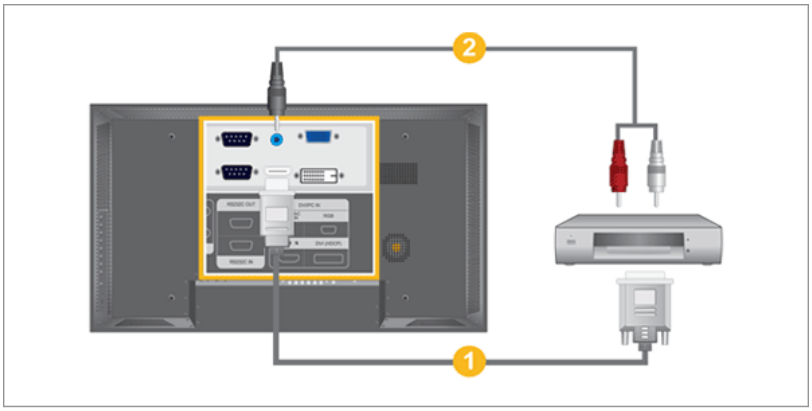
Connecting Using a HDMI Cable



Note

- Input devices such as digital DVD are connected to the HDMI IN terminal of the LCD Display using the HDMI cable.
- You cannot connect a PC to the HDMI IN terminal.

Connecting Using a DVI to HDMI Cable



Note

- Connect the DVI output terminal of a digital output device to the HDMI IN terminal of the LCD Display using a DVI to HDMI cable.
- Connect the red and white jacks of an RCA to stereo (for PC) cable to the same colored audio output terminals of the digital output device, and connect the opposite jack to the HDMI / PC / DVI-D AUDIO IN terminal of the LCD Display.

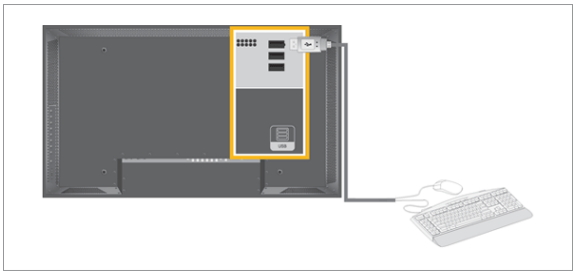
Connecting a USB device

Using a Power cord with Earth

- In the event of failure, the earth lead may cause electric shock. Make sure to wire the earth lead in correctly, before connecting the AC power. When unwiring the earth lead, make sure to disconnect the AC power in advance.

Note

AV input devices such as DVD players, VCR's or camcorders as well as your computer can be connected to the LCD Display. For detailed information on connecting AV input devices, refer to the User Controls under Adjusting Your LCD Display.



Note

You can connect USB devices such as a mouse or keyboard.

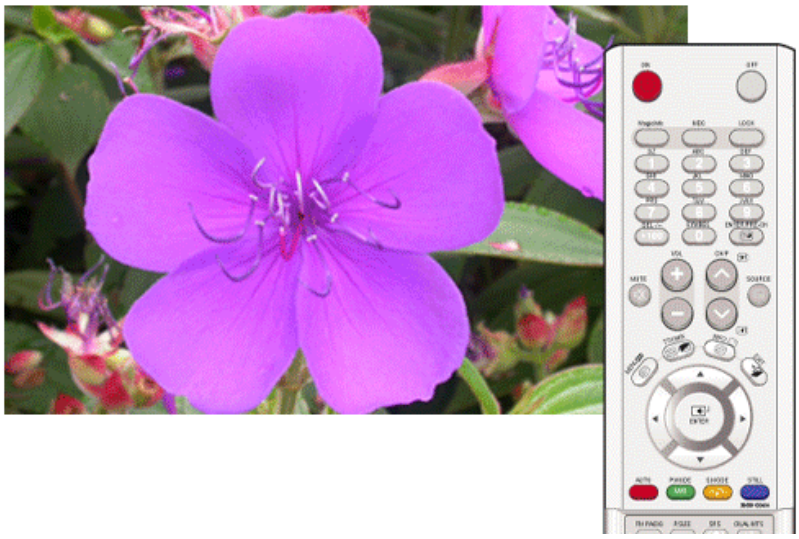
Adjusting the LCD Display

Direct Functions

Available Modes

- P **PC / BNC / DVI**
- A **AV**
- S **S-Video**
- C **Component**
- H **HDMI**

MDC P A S C H



Moves to the Multi Control OSD screen.

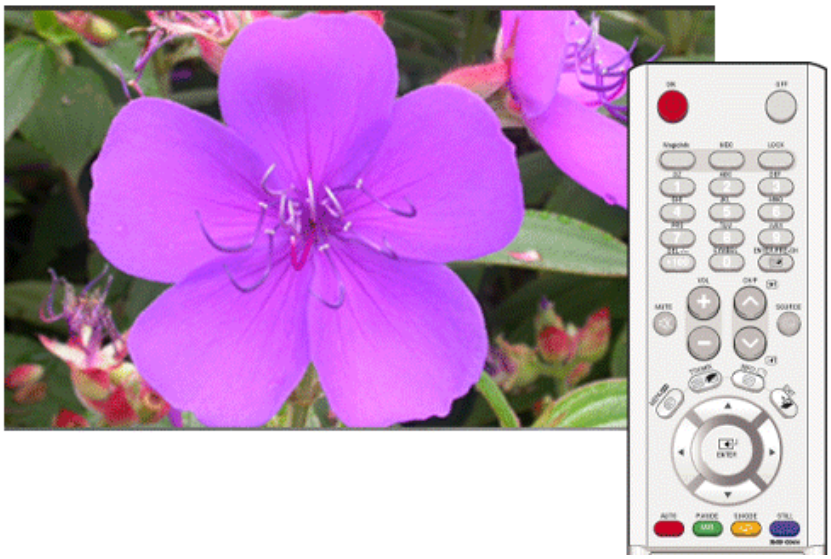
LOCK P A S C H

This is the function that locks the OSD in order to keep the current states of settings or prevent others from adjusting the current settings.

Note

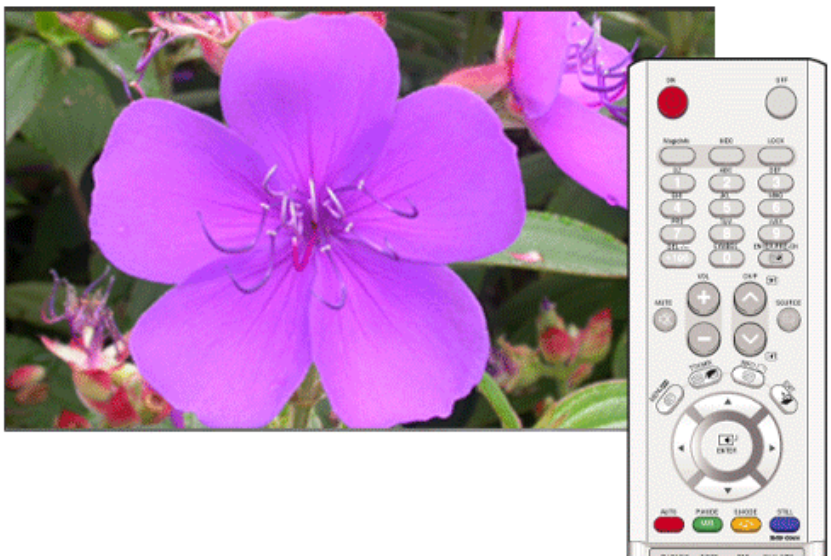
- When setting the Lock function, you can only operate the power and lock buttons on the remote control and set.
- Resetting the password for the function key lock. Press MUTE → 1 → 8 → 6 → On. The password will be reset to '0000'. The remote control is required for resetting the password.

Lock On



Hold down the MENU button for more than five (5) seconds to activate the OSD adjustment lock function.

Lock Off



Hold down the MENU button for more than five (5) seconds to deactivate the OSD adjustment lock function.

Input

Available Modes

- **PC / BNC / DVI**
- **AV**
- **S-Video**

- **Component**
- **HDMI**

Source List



Use to select **PC**, **BNC**, or other external input sources connected to the LCD Display. Use to select the screen of your choice.

1. **PC**
2. **BNC**
3. **DVI**
4. **AV**
5. **S-Video**
6. **Component**
7. **HDMI**

Note

- The direct button on the remote control is the 'SOURCE' button.
- **PIP** turns off when the LCD Display is switched to an external source.
- For **PC** and **DVI**, this is deactivated if the cable is disconnected.

MENU → ENTER → ENTER → ▲, ▼ → ENTER

PIP

Note

Available Modes: **PIP ON**

When external AV devices such as VCRs or DVDs are connected to the LCD Display , **PIP** allows you to watch video from those devices in a small window super-imposed on the PC Video signal. (**Off**/**On**)

Note

- More than one **PIP** cannot be overlapped on screen as **BNC** and the **Component** use the same terminal.
- If you select , , in **Size**, **Position** and **Transparency** will not be activated.

PIP



Turns the **PIP** Screen **Off**/**On**.

- **Off**
- **On**

Note

The direct button on the remote control is the 'PIP' button.

MENU → ENTER → ▲ , ▼ → ENTER → ENTER → ▲ , ▼ → ENTER

Source



Selects the input source for the PIP.

- **PC** : **AV** / **S-Video** / **Component** / **HDMI** Mode
- **BNC** : **AV** / **S-Video** / **HDMI** Mode
- **DVI** : **AV** / **S-Video** / **Component** Mode
- **AV** / **S-Video** : **PC** / **BNC** / **DVI** Mode
- **Component** : **PC** / **DVI** Mode
- **HDMI** : **PC** / **BNC** Mode

Note

The direct button on the remote control is the 'SOURCE' button.

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Swap



Swaps the contents of the PIP and main image.

The image in the PIP window will appear on the main screen, and the main screen image will appear in the PIP window.

Note

The direct button on the remote control is the 'SWAP' button.

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Size



Changes the Size of the PIP window.

Note

The direct button on the remote control is the 'SIZE' button.

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Position



Changes the Position of the PIP window.

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Transparency

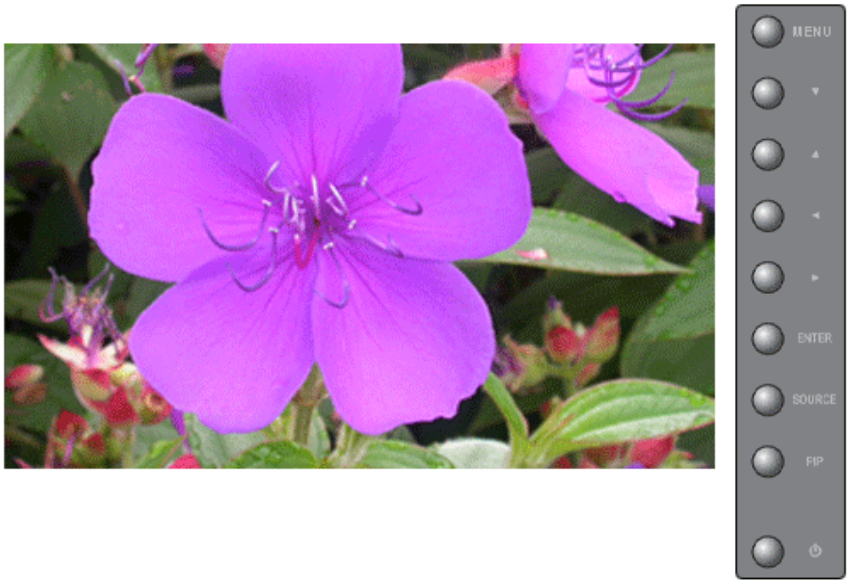


Adjusts the Transparency of PIP windows.

- **High**
- **Medium**
- **Low**
- **Opaque**

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Edit Name



Name the input device connected to the input jacks to make your input source selection easier.

1. **PC**
2. **BNC**

3. **DVI**
4. **AV**
5. **S-Video**
6. **Component**
7. **HDMI**

MENU → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Picture [PC / BNC / DVI Mode]

Available Modes

- **PC / BNC / DVI**
- **AV**
- **S-Video**
- **Component**
- **HDMI**

MagicBright



MagicBright is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Currently four different modes are available: **Entertain**, **Internet**, **Text** and **Custom**. Each mode has its own pre-configured brightness value. You can easily select one of the four settings by simply pressing the **MagicBright** control button.

1. **Entertain**

 High brightness

 For documentations or works involving heavy text.

2. **Internet**

Medium brightness

For working with a mixture of images such as texts and graphics.

3. **Text**

 Normal brightness

 For documentations or works involving heavy text.

4. **Custom**

 Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste.

 If this is the case, adjust the brightness and contrast by using the OSD menu.

Note

The direct button on the remote control is the 'M/B' button.

MENU → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Custom



By using the on-screen menus, the contrast and brightness can be changed to your personal preference.

1. **Contrast**

 Adjusts the Contrast.

2. **Brightness**

 Adjusts the Brightness.

Note

By adjusting the picture using the **Custom** function, **MagicBright** will change to **Custom** mode.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ / ◄, ► → ENTER

Color Tone



The color tones can be changed.

1. **Off**
2. **Cool**
3. **Normal**
4. **Warm**
5. **Custom**

 (Available in **PC**, **BNC** mode only)

Note

If you set the **Color Tone** to **Cool**, **Normal**, **Warm**, or **Custom**, the **Color Temp** function is disabled.

If you set the **Color Tone** to **Off**, the **Color Control** function is disabled

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Color Control



Adjusts individual Red, Green, Blue color balance.

(Available in **PC**, **BNC** mode only)

1. **Red**
2. **Green**
3. **Blue**

Note

If you adjust the picture by using the **Color Control** function, **Color Tone** will turn to the **Custom** mode.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Color Temp



Color Temp is a measure of the 'warmth' of the image colors.

Note

This function is only enabled if the **Color Tone** is set to **Off**.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ENTER

Image Lock

Image Lock is used to fine-tune and get the best image by removing noise that creates unstable images with jitters and shakiness. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again.

(Available in **PC**, **BNC** mode only)

Coarse



Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the horizontal control menu.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Fine



Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ENTER

Position



Adjusts the screen location horizontally and vertically.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ / ◀, ▶ → ENTER

Auto Adjustment



The values of **Fine**, **Coarse**, **Position** are adjusted automatically. By changing the resolution in the control panel, the auto function is performed.

(Available in **PC**, **BNC** mode only)

Note

The direct button on the remote control is the 'AUTO' button.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Signal Balance

This is used to make up for the weak RGB signal transmitted by a long signal cable.

(Available in **PC**, **BNC** mode only)

Signal Balance



Selects either **On** or **Off** with the signal control.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Signal Control



Adjusts the **Gain** and **Sharpness** manually.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ◀, ▶ → ENTER

Size



The **Size** can be switched.

1. **16:9**
2. **4:3**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

PIP Picture



Adjusts the PIP Screen Settings.

Note

Available Modes: **PIP ON**

1. **Contrast**

 Adjusts the Contrast of the PIP window on the screen.

2. **Brightness**

 Adjusts the Brightness of the PIP window on the screen.

3. **Sharpness**

 Adjusts the difference between the lightest and darkest areas of the PIP window.

4. **Color**

 Adjusts the Color of the PIP window on the screen.

5. **Tint**

 Adds a natural tone to the PIP window.

 Note

 You can view a picture from AV, S-Video through the PIP screen in **PC**, **BNC** and **DVI** mode. Operates only if the video signal is NTSC.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ◀, ▶ → ENTER

Picture [AV / S-Video / Component / HDMI Mode]

Available Modes

- **PC / BNC / DVI**

- **AV**
- **S-Video**
- **Component**
- **HDMI**

Mode



The LCD Display has four automatic picture settings ("**Dynamic**", "**Standard**", "**Movie**" and "**Custom**") that are preset at the factory.

Dynamic, **Standard**, **Movie**, or **Custom** can be activated.

1. **Dynamic**
2. **Standard**
3. **Movie**
4. **Custom**

Note

The direct button on the remote control is the 'P.MODE' button.

MENU → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Custom ASCH



By using the on-screen menus, the contrast and brightness can be changed to your personal preference.

1. **Contrast**

 Adds a natural tone to the PIP window.

2. **Brightness**

 Adjusts the Brightness.

3. **Sharpness**

 Adjusts the picture Sharpness.

4. **Color**

 Adjusts the picture Color.

5. **Tint**

 Adds a natural tone to the display.

 Note

 Operates only for **AV** and **S-Video** mode. Operates only if the video signal is NTSC.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ◀, ▶ → ENTER

Color Tone ASCH



The color tones can be changed. The individual Color components are also user adjustable.

1. **Off**
2. **Cool2**
3. **Cool1**
4. **Normal**
5. **Warm1**
6. **Warm2**

Note

If you set the **Color Tone** to **Cool1**, **Cool2**, **Normal**, **Warm1**, or **Warm2**, the **Color Temp** function is disabled.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Color Temp ASCH



Color temp is a measure of the 'warmth' of the image colors.

Note

This function is only enabled if the **Color Tone** is set to **Off**.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ENTER

Size ASCH



The **Size** can be switched.

1. **16:9**
2. **Zoom 1**
3. **Zoom 2**
4. **4:3**

Note

The **Zoom1**, **Zoom2** are not available in 1080i (or over 720p) of **Component** and **HDMI**.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Dynamic Contrast



Dynamic Contrast is to automatically detect distribution of inputted visual signal and adjust to create optimum contrast.

1. **Off**
2. **On**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Digital NR (Digital Noise Reduction)



Turns the Digital Noise Reduction feature **Off**/**On**. The Digital Noise Reduction feature allows you to enjoy clearer and crisper images.

1. **Off**
2. **On**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Film Mode ASC



Turns **Film Mode Off/On**.

The **Film Mode** feature offers you a theater-quality viewing experience.

(Not available in **HDMI** Mode)

1. **Off**
2. **On**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

PIP Picture ASCH



Adjusts the PIP Screen Settings.

Note

Available Modes: **PIP ON**

1. **Contrast**

 Adjusts the Contrast of the PIP window on the screen.

2. **Brightness**

 Adjusts the Brightness of the PIP window on the screen.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◄, ► → ENTER

Sound

Available Modes

- **PC / BNC / DVI**
- **AV**
- **S-Video**
- **Component**
- **HDMI**

Mode



The LCD Display has a built-in high fidelity stereo amplifier.

1. **Standard**

 Selects **Standard** for the standard factory settings.

2. **Music**

 Selects **Music** when watching music videos or concerts.

3. **Movie**

 Selects **Movie** when viewing movies.

4. **Speech**

 Selects **Speech** when watching a show that is mostly dialogue (i.e., news).

5. **Custom**

 Selects **Custom** if you want to Adjusts the settings according to your personal preferences.

MENU → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Custom



The sound settings can be adjusted to suit your your personal preferences.

1. **Bass**

 Emphasizes low frequency audio.

2. **Treble**

 Emphasizes high frequency audio.

3. **Balance**

 Allows you to Adjusts the sound balance between the left and right speakers.

Note

- You can hear the sound even when sound value is set to 0.
- If you adjust sound using **Custom** function, **Mode** will turn to **Custom** mode.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ENTER

Auto Volume PASCH



Reduces the difference in volume control between broadcasters.

1. **Off**
2. **On**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

SRS TS XT PASCH



SRS TS XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. TruSurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

1. **Off**
2. **On**

Note

The direct button on the remote control is the 'SRS' button.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Sound Select PASCH



Selects either Main or Sub when **PIP** is **On**.

Note

Available Modes: **PIP ON**

1. **Main**
2. **Sub**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Setup

Available Modes

- **PC / BNC / DVI**
- **AV**
- **S-Video**
- **Component**
- **HDMI**

Language PASCH



You can choose one of 11 languages.

- Deutsch, English, Español, Français, Italiano, Português Русский, Svenska, 한국어, 中国语, 日本語,

Note

The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.

MENU → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Time PASCH

Selects from one of 4 time settings, **Clock Set**, **Sleep Timer**, **On Timer**, and **Off Timer**.

Note

When selecting Yes for the **On Timer** or **Off Timer** when the Clock is not set up, a guiding message pops up: "**Set the clock first.**".

Clock Set



Current Time Setting.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Sleep Timer



Turns the LCD Display off automatically at certain times. (**Off**, **30**, **60**, **90**, **120**, **150**, **180**)

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ▲, ▼ → ENTER → ◀, ▶ → ▲, ▼ → ENTER

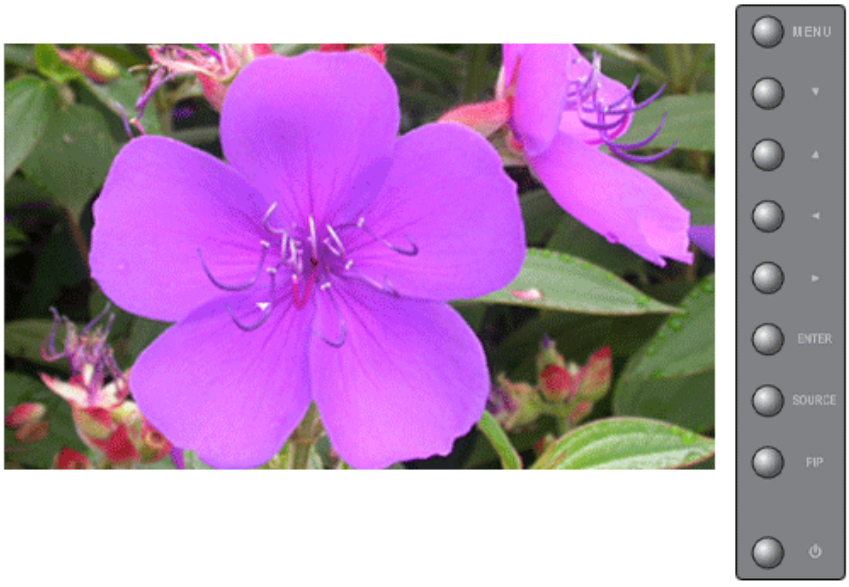
On Timer



Turns the LCD Display on automatically at a preset time. Controls the mode and the volume level at the time the LCD Display turns on automatically.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ▲, ▼ → ENTER

Off Timer



Turns the LCD Display off automatically at a preset time.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ◀, ▶ → ▲, ▼ → ENTER

Menu Transparency PASCH



Change the transparency of the background of the OSD.

1. **High**
2. **Medium**
3. **Low**
4. **Opaque**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Safety Lock PIN PASCH



The password can be changed.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → [0□ 9] → [0□ 9] → [0□ 9]

Energy Saving

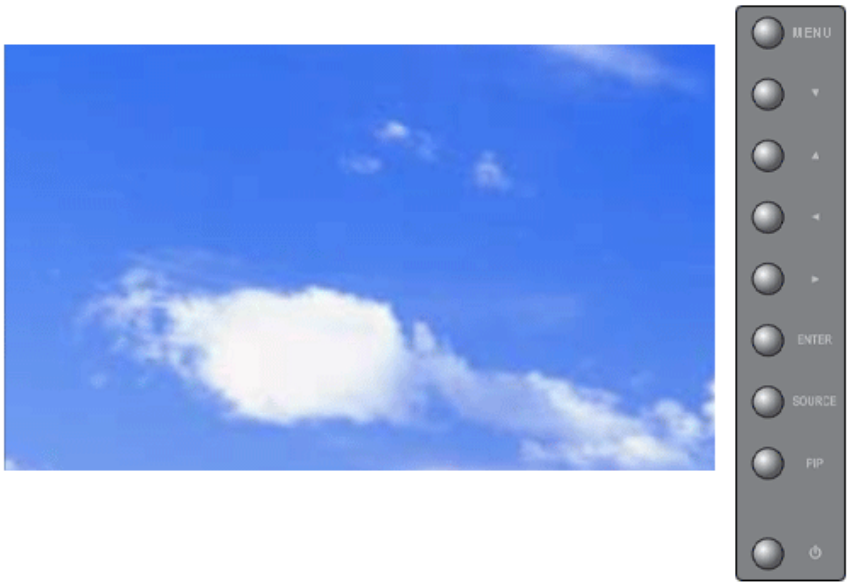


This feature adjusts the power consumption of the unit in order to save energy.

1. **Off**
2. **On**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → MENU

HDMI Black Level



When a DVD or set-top box is connected to your TV via HDMI, it may cause a degradation in the screen quality, such as an increase in the black level, a low contrast, or discoloration, etc., depending on the external device connected. In this case, adjust the screen quality of your TV by configuring the **HDMI black level**.

1. **Normal**
2. **Low**

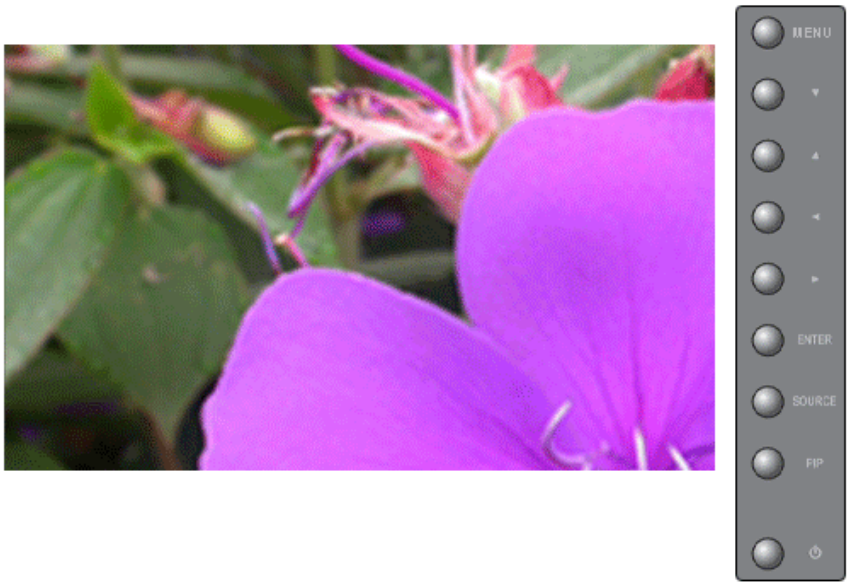
MENU → ▲ , ▼ → ENTER → ▲ , ▼ →ENTER→ ▲ , ▼ → ENTER → MENU

Video Wall

A **Video Wall** is a set of video screens connected together, so that each screen shows a part of the whole picture or where the same picture is repeated on each screen.

When the **Video Wall** is **on**, you can adjust the **Video Wall** screen setting.

Video Wall

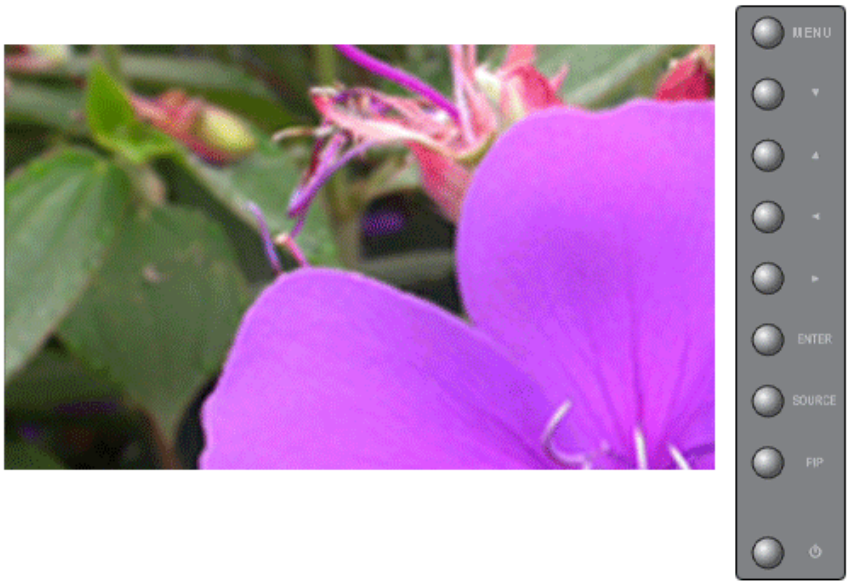


Turns Off/On the **Video Wall** function of the selected display Off/On.

1. **Off**
2. **On**

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Format



The **format** can be selected to see a divided screen.

1. **Full**

 Provides a full screen without any margins.

2. **Natural**

 Displays a natural image with the original aspect ratio intact.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Horizontal



Sets how many parts the screen should be divided horizontally.

Five adjustment levels: 1, 2, 3, 4, and 5.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Vertical



Sets how many parts the screen should be divided vertically.

Five adjustment levels: 1, 2, 3, 4, and 5.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Screen Divider



The screen can be divided into several images. A number of screens can be selected with a different layout when dividing.

- Select a mode in Screen Divider.
- Select a display in Display Selection.
- The selection will be set up by pressing a number in the selected mode.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Safety Screen PASCH

The **Safety Screen** function is used to prevent afterimages that may appear when a still picture is displayed on the screen over a long time.

- The **Screen Scroll** function scrolls the screen for the specified period of time.
- This function is not available when the power is turned off.

Safety Screen



Determines whether to turn the **Screen Scroll** function Off or On.

1. **Off**
2. **On**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Interval



Determines the time interval to run the **Screen Scroll** operation. (1~10 Hour)

The time is calculated on the basis of the power on time.

By default, the time is set to 10 hours.

1. 1~10 **Hour**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Second



Determines the time period to run the **Screen Scroll** operation. (1~5 Second)

By default, the time is set to 5 seconds.

- Type-**Scroll** : 1~5 **Second**
- Type-**Pixel**, **Bar**, **Eraser** : 10~50 **Second**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Type



You can change the **Safety Screen** Type.

1. **Scroll**
2. **Pixel**
3. **Bar**

4. **Eraser**

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Resolution Select PASCH



When the picture is not displayed properly on the screen when setting the graphics card resolution of the computer to 1024 x 768 @ 60Hz, 1280 x 768 @ 60Hz, 1360 x 768@ 60Hz or 1366 x768 @ 60Hz, by using this function(Resolution Select), you can have the picture displayed on the screen in the specified resolution.

Note

Available in **PC**/**BNC** mode only

1. **Off**
2. **1024 X 768**
3. **1280 X 768**
4. **1360 x 768**
5. **1366 X 768**

Note

Selecting the menu is only allowed when the graphics resolution is set to 1024 x 768 @ 60Hz, 1280 x 768 @ 60Hz, 1360 x 768@ 60Hz or 1366 x768 @ 60Hz.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ▲, ▼ → ENTER

Lamp Control PASCH



Adjusts the inverter lamp in order to reduce energy consumption.

Note

This function does not operate when **Dynamic Contrast** is set to **On** in **AV**, **S-Video**, **Component** modes.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Power On Adjustment PASCH



Adjusts the Power On time for the screen.

Caution: Set the Power On time to be loger to avoid overvoltage.

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER



Adjusts the FAN.

1. **Normal**
2. **Pivot**

Note

When pivoting your LCD Display, make sure to select PIVOT for the FAN.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER

Reset

Reverts the product settings to factory defaults. **DVI** source, the Reset function is only available when **PC** / **DVI** is being used.

Note

The Reset function is not available when **Video Wall** is **On**.

Image Reset



Note

Available in **PC**/**BNC** mode only

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ◀, ▶ → ENTER

Color Reset



Note

Available in **PC**/**BNC** mode only

MENU → ▲, ▼ → ENTER → ▲, ▼ → ENTER → ENTER → ▲, ▼ → ENTER

Multi Control

Available Modes

- **PC / BNC / DVI**
- **AV**
- **S-Video**
- **Component**
- **HDMI**

Multi Control

Assigns an individual ID to the SET.

ID Setup



Assigns distinctive IDs to the SET.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ENTER → [0~9]

ID Input



Use to select the transmitter functions of the individual SET. Only a SET where the ID corresponds to the transmitter setting becomes activated.

MENU → ▲ , ▼ → ENTER → ▲ , ▼ → ENTER → ENTER → [0~9]

Troubleshooting

Self-Test Feature Check

Note

Check the following items yourself before calling for assistance. Contact a Service Center for problems that you cannot solve by yourself.

Self-Test Feature Check

1. Turn off both your computer and the LCD Display.
2. Unplug the video cable from the back of the computer.
3. Turn on the LCD Display.

 The figure shown below ("**Check Signal Cable**") appears on a black background when the LCD Display is working normally even though no video signal is detected: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.



4. Turn off your LCD Display and reconnect the video cable; then turn on both your computer and the LCD Display

If your LCD Display screen remains blank after using the previous procedure, check your video controller and computer system; your LCD Display is functioning properly.

Warning Messages

You can even view the screen at a resolution of 1360 x 768. However, you will receive the following message for a minute; You can choose to change the screen resolution or stay in the current mode during that time. And if the resolution is more than 85Hz, you will see the black screen because the LCD Display does not support over 85Hz.



Note

Refer to Specifications > Preset Timing Modes for the resolutions or frequencies supported by the LCD Display.

Maintenance and Cleaning

1) Maintaining the LCD Display Case.

Clean with a soft cloth after disconnecting the power cord.



- Do not use benzene, thinner or other flammable substances, or a wet cloth.
- We recommend that a SAMSUNG cleansing agent is used to prevent damage to the screen.

2) Maintaining the Flat Panel Display Screen.

Clean with a soft cloth (cotton flannel) smoothly.



- Never use acetone, benzene or thinner.

 (They may cause flaws or deformation of the screen surface.)
- The user will be required to pay costs and related expenses for repairing damages caused.

Symptoms and Recommended Actions

Note

A LCD Display recreates visual signals received from the computer. Therefore, if there is a problem with the computer or the video card, this can cause the LCD Display to become blank, have poor coloring, become noisy, and video mode not supported, etc. In this case, first check the source of the problem, and then contact a Service Center or your dealer.

1. Check if the power cord and the video cables are properly connected to the computer.
2. Check if the computer beeps more than 3 times when booting.

 (If it does, request an a service for the main board of the computer.)
3. If you installed a new video card or if you assembled the PC, check if you installed the Adaptor (video).
4. Check if the scanning ratio of the video screen is set to between 50 Hz ~ 85 Hz.

 (Do not exceed 60Hz when using the maximum resolution.)
5. If you have problems in installing the Adaptor (video) driver, boot the computer in Safe Mode, remove the Display Adaptor in the "Control Panel → System → Device Administrator" and then reboot the computer to reinstall the Adaptor (video) driver.

Check List

Note

- The following table lists possible problems and their solutions. Before calling for assistance, check the information in this section to see if you can remedy any problems for yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Problems related to the Installation (PC Mode)

Note

Problems related to the LCD Display installation and their solutions are listed.

Q: The LCD Display screen flickers.

A: Check if the signal cable between the computer and the LCD Display is securely connected.

(Refer to Connecting a Computer)

Problems related to the Screen

Note

Problems related to the LCD Display screen and their solutions are listed.

Q: The screen is blank and the power indicator is off.

A: Ensure that the power cord is firmly connected and the LCD Display is on.

(Refer to the Connecting a Computer)

Q: "**Check Signal Cable**" message.

A: Ensure that the signal cable is firmly connected to the PC or video sources.

(Refer to the Connecting a Computer)

A: Ensure that the PC or video sources are turned on.

Q: "**Not Optimum Mode**" message.

A: Check the maximum resolution and the frequency of the video Adaptor.

A: Compare these values with the data in the Preset Timing Modes Chart.

Q: The picture rolls vertically.

A: Check if the signal cable is securely connected. Re-connect it, if necessary.

(Refer to Connecting a Computer)

Q: The image is not clear; picture is blurred.

A: Run Frequency **Coarse** and **Fine** tuning.

A: Turn on again after removing all accessories (video extension cable, etc.)

A: Set the resolution and frequency to the recommended ranges.

Q: The picture image is unstable and shakes.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes.

Q: Ghost images are shown in the picture.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes.

Q: The image is too light or too dark.

A: Adjusts the **brightness** and **contrast**.

(Refer to the **Brightness**, **Contrast**)

Q: The screen color is inconsistent.

A: Adjust color using **Custom** under OSD Color Adjustment menu.

Q: The color image is distorted by dark shadows.

A: Adjust color using **Custom** under OSD Color Adjustment menu.

Q: The color white is poor.

A: Adjust color using **Custom** under OSD Color Adjustment menu.

Q: The power Indicator blinks green.

A: The LCD Display is currently saving the changes made to the settings to the OSD memory.

Q: The screen is blank and the power indicator light is steady green or blinks every 0.5 or 1 seconds.

A: The LCD Display is using its power management system.

A: Press a key on the keyboard.

Q: The screen is blank and it is blinking.

A: If you see the "**TEST GOOD**" message on the screen when you pressing the MENU button, check the cable connection between the LCD Display and the computer to ensure that the connector is properly connected.

Problems related to Audio

Note

Problems related to audio signals and their solutions are listed below.

Q: No sound.

A: Ensure that the audio cable is firmly connected to both the audio-in port on your LCD Display and the audio-out port on your sound card.

(Refer to the Connecting a Computer)

A: Check the volume level.

Q: The sound level is too low.

A: Check the volume level.

A: If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.

Q: The sound is too high or too low.

A: Adjusts the **Treble** and **Bass** to the appropriate levels.

Problems related to the Remote Control

Note

Problems related to the remote control and their solutions are listed.

Q: The remote control buttons do not respond.

A: Check the polarities (+/-) of the batteries.

A: Check if the batteries are empty.

A: Check if the power is on.

A: Check if the power cord is securely connected.

A: Check if a special fluorescent or neon lamp is on in the vicinity.

Q & A

Q: How can I change the frequency?

A: The frequency can be changed by reconfiguring the video card.

Note

that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)

Q: How can I Adjusts the resolution?

A: Windows XP:

Set the resolution in the Control Panel → Appearance and Themes → Display → Settings.

A: Windows ME/2000:

Set the resolution in the Control Panel → Display → Settings.

* Contact the video card manufacturer for details.

Q: How can I set the Power Saving function?

A: Windows XP:

Set the resolution in the Control Panel → Appearance and Themes → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows ME/2000:

Set the resolution at the Control Panel → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

Q: How can I clean the outer case/LCD Panel?

A: Disconnect the power cord and then clean the LCD Display with a soft cloth, using either a cleaning solution or plain water.

Do not leave any detergent or scratches on the case. Do not let any water enter the LCD Display.

Q: How can I play the video?

A: The video supports the MPEG1 and WMV codecs only. Install the corresponding codec to play the video. Note that some of the codecs can be incompatible.

Note

Before calling for assistance, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Specifications

General

General	
Model Name	SyncMaster 400UX

LCD Panel	
Size	40 " Diagonal (101 cm)
Display area	885.168 mm (H) X 497.664 mm (V)
Pixel Pitch	0.648 mm (H) X 0.648 mm (V)

Synchronization	
Horizontal	30 ~ 81 kHz
Vertical	56 ~ 85 Hz

Display Color

16.7 M

Resolution	
Optimum resolution	1360 x 768 @ 60 Hz / 1366 x 768 @ 60 Hz depends on graphics card used
Maximum resolution	1360 x 768 @ 60 Hz

Input Signal, Terminated

RGB Analog, DVI Compliant Digital RGB

0.7 Vp-p ±5 %

Separate H/V sync, Composite, SOG(Option)

TTL level (V high ≥ 2.0 V, V low ≤ 0.8 V)

Maximum Pixel Clock

140MHz (Analog,Digital)

Power Supply

AC 100 - 240 V~ (+/- 10 %), 50/60 Hz ± 3 Hz

Signal Cable

15pin-to-15pin D-sub cable, Detachable

DVI-D to DVI-D connector, Detachable (Sold separately)

Dimensions (W x H x D) / Weight

914 x 526 x 118 mm / 35.9 x 20.7 x 4.6 inch (Without Stand) / 22.5 kg / 49.6 lbs

914 x 585 x 311 mm / 35.9 x 23.0 x 12.2 inch (With Stand)

Dimensions (WxHxD)/ Weight (With SAMSUNG wall mount kit)
914 x 526 x 118 mm / 35.9 x 20.7 x 4.6 inch (Without Stand) / 25.1 kg / 55.3 lbs 914 x 585 x 311 mm / 35.9 x 23.0 x 12.2 inch (With Stand)

VESA Mounting Interface
400 x 600 mm

Environmental considerations	
Operating	Temperature : 50°F ~ 104°F (10°C ~ 40°C) Humidity : 10 % ~ 80 %, non-condensing
Storage	Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing

Audio Characteristics	
Audio Input 1	RCA Jack Red(R) White(L), 0.5 Vrms (-9 dB)
Audio Input 2	RCA Jack Red(R) White(L), 0.5 Vrms (-9 dB)
PC Audio Input	3.5 øStereo Jack, 0.5 Vrms (-9 dB)
Frequency	RF: 80 Hz ~ 15 kHz (at -3 dB)
Response	A/V: 80 Hz ~ 20 kHz (at -3 dB)

Plug and Play Capability
This LCD Display can be installed on any Plug & Play compatible system. The interaction of the LCD Display and the computer systems will provide the best operating conditions and LCD Display settings. In most cases, the LCD Display installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable
TFT-LCD panels manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above are used for this product. But the pixels of RED, GREEN, BLUE and WHITE color appear to be bright sometimes or some black pixels may be seen. This is not from bad quality and you can use it without any problems. For example, the number of TFT-LCD sub pixels contained in this product are 3,133,440.

Note

Design and specifications are subject to change without prior notice.

Class B Equipment (Information Communication equipment for residential use)

This product complies with the Electromagnetic Compatibility Directives for residential use and can be used in all areas including common residential areas. (Class B equipment emits less electromagnetic waves than Class A equipment.)

PowerSaver

This LCD Display has a built-in power management system called PowerSaver. This system saves energy by switching your LCD Display to low-power mode when it has not been used for a certain amount of time. The LCD Display automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your LCD Display OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPM compliant

video card installed in your computer. Use the software utility installed on your computer to set up this feature.

PowerSaver

State	Normal Operation	Power saving mode	Power off
Power Indicator	Green	Green, Blinking	Amber
Power Consumption	Less than 220 watts	Less than 1 watts	Less than 1 watts

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjusts the screen as follows.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 X 960	60.000	60.000	108.000	+/+
VESA, 1280 X 1024	63.981	60.020	108.000	+/+
VESA, 1280 X 1024	79.976	75.025	135.000	+/+
VESA, 1360 x 768	47.712	60.015	85.500	+/+



Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the

user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz

General

General	
Model Name	SyncMaster 460UX

LCD Panel	
Size	46 " Diagonal (116 cm)
Display area	1018.353 mm (H) x 572.544 mm (V)
Pixel Pitch	0.7455 mm (H) x 0.7455 mm (V)

Synchronization	
Horizontal	30 ~ 81 kHz
Vertical	56 ~ 85 Hz

Display Color

16.7 M

Resolution	
Optimum resolution	1360 x 768 @ 60 Hz / 1366 x 768 @ 60 Hz depends on graphics card used
Maximum resolution	1360 x 768 @ 60 Hz

Input Signal, Terminated

RGB Analog, DVI Compliant Digital RGB

0.7 Vp-p ±5 %

Separate H/V sync, Composite, SOG(Option)

TTL level (V high ≥ 2.0 V, V low ≤ 0.8 V)

Maximum Pixel Clock

140MHz (Analog,Digital)

Power Supply

AC 100 - 240 V~ (+/- 10 %), 50/60 Hz ± 3 Hz

Signal Cable

15pin-to-15pin D-sub cable, Detachable

DVI-D to DVI-D connector, Detachable (Sold separately)

Dimensions (W x H x D) / Weight

1049 x 603 x 118 mm / 41.3 x 23.7 x 4.6 inch (Without Stand) / 29 kg / 63.9 lbs

1049 x 662 x 311 mm / 41.3 x 26.0 x 12.2 inch (With Stand)

Dimensions (WxHxD)/ Weight (With SAMSUNG wall mount kit)
1049 x 603 x 118 mm / 41.3 x 23.7 x 4.6 inch (Without Stand) / 32kg / 70.5 lbs 1049 x 662 x 311 mm / 41.3 x 26.0 x 12.2 inch (With Stand)

VESA Mounting Interface
400 x 600 mm

Environmental considerations	
Operating	Temperature : 50°F ~ 104°F (10°C ~ 40°C) Humidity : 10 % ~ 80 %, non-condensing
Storage	Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing

Audio Characteristics	
Audio Input 1	RCA Jack Red(R) White(L), 0.5 Vrms (-9 dB)
Audio Input 2	RCA Jack Red(R) White(L), 0.5 Vrms (-9 dB)
PC Audio Input	3.5 øStereo Jack, 0.5 Vrms (-9 dB)
Frequency	RF: 80 Hz ~ 15 kHz (at -3 dB)
Response	A/V: 80 Hz ~ 20 kHz (at -3 dB)

Plug and Play Capability
This LCD Display can be installed on any Plug & Play compatible system. The interaction of the LCD Display and the computer systems will provide the best operating conditions and LCD Display settings. In most cases, the LCD Display installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable
TFT-LCD panels manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above are used for this product. But the pixels of RED, GREEN, BLUE and WHITE color appear to be bright sometimes or some black pixels may be seen. This is not from bad quality and you can use it without any problems. For example, the number of TFT-LCD sub pixels contained in this product are 3,133,440.

Note

Design and specifications are subject to change without prior notice.

Class B Equipment (Information Communication equipment for residential use)

This product complies with the Electromagnetic Compatibility Directives for residential use and can be used in all areas including common residential areas. (Class B equipment emits less electromagnetic waves than Class A equipment.)

PowerSaver

This LCD Display has a built-in power management system called PowerSaver. This system saves energy by switching your LCD Display to low-power mode when it has not been used for a certain amount of time. The LCD Display automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your LCD Display OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPM compliant

video card installed in your computer. Use the software utility installed on your computer to set up this feature.

PowerSaver

State	Normal Operation	Power saving mode	Power off
Power Indicator	Green	Green, Blinking	Amber
Power Consumption	Less than 270 watts	Less than 1 watts	Less than 1 watts

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjusts the screen as follows.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
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MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 X 960	60.000	60.000	108.000	+/+
VESA, 1280 X 1024	63.981	60.020	108.000	+/+
VESA, 1280 X 1024	79.976	75.025	135.000	+/+
VESA, 1360 x 768	47.712	60.015	85.500	+/+



Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the

user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz

Information

For Better Display

Adjust the computer resolution and screen injection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for TFT-LCD.

- Resolution: 1360 x 768
- Vertical frequency (refresh rate): 60 Hz

TFT-LCD panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without any problems.

- For example, the number of TFT-LCD sub pixels contained in this product are 3,133,440.

When cleaning the monitor and the panel outside, please apply the recommended small amount of cleaner by using a soft cloth to polish. Do not force the LCD area but rub softly. If excessive force is applied, you may stain it.

If you are not satisfied with the picture quality, you can get better quality of picture by performing the "**Auto Adjustment** function" in display screen that is appeared as window termination button is pressed. If there's still noise after the automatic adjustment, use the **Fine**/**Coarse** adjustment function.

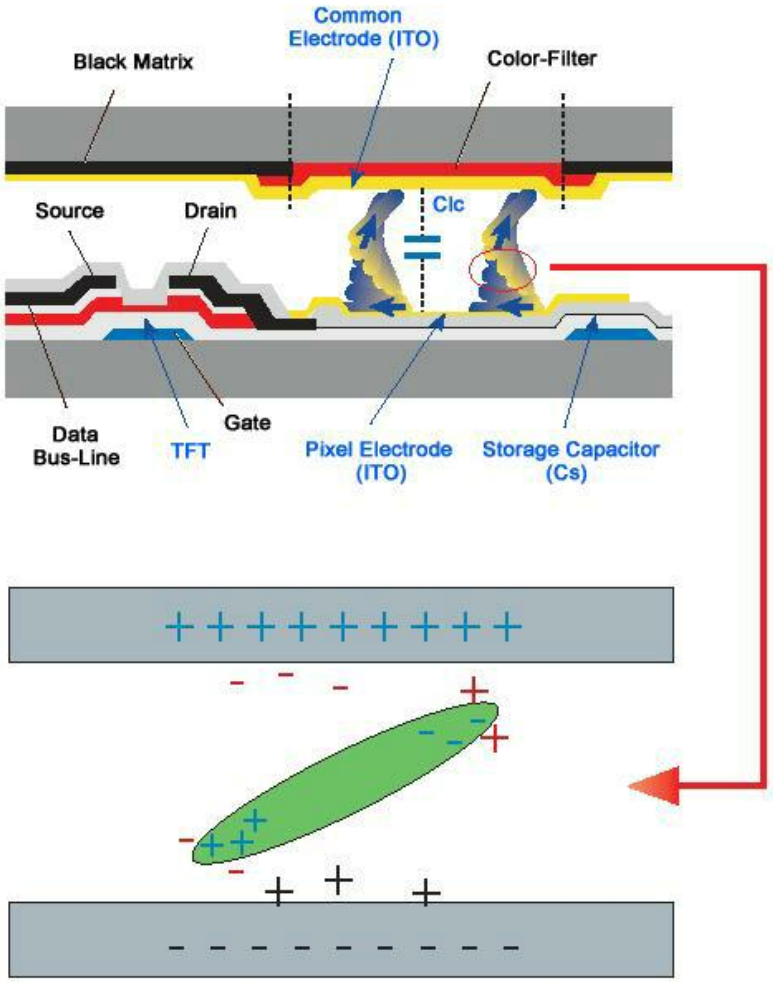
When viewing a fixed screen for an extended period of time, a residual image or blurriness may appear. Change the mode to energy save or set a screensaver to move the picture when you need to be away from the monitor for an extended period of time.

PRODUCT INFORMATION (Image Retention Free)

What is Image Retention ?

Image retention may not occur when a LCD panel is operated under normal conditions.

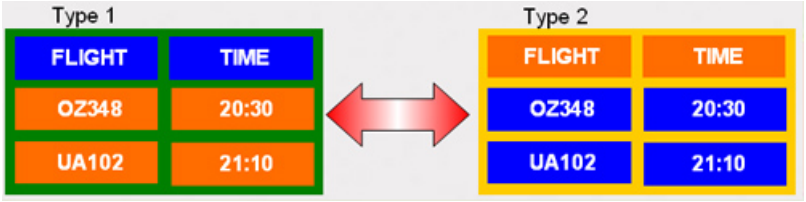
Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (over 12 hours), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes increases with time, forcing the liquid crystal to lean. When this occurs, the previous image may be seen when the pattern is changed. To prevent this, the accumulated voltage difference must be decreased.



Power Off, Screen Saver, or Power Save Mode

- Turn the power off for 4 hours after 20 hours in use
- Turn the power off for 2 hours after 12 hours in use
- Set the Monitor to power off with the PC Display Properties Power Scheme.
- Use a Screen saver if possible - Screen saver in one color or a moving image is recommended.

Change the Color Information periodically



Note

Use Two different colors

Rotate the Color Information with 2 different colors every 30 minutes.

- Avoid using a combination of characters and background color with large difference in luminance.

 Avoid using Grey colors, which can cause Image retention easily.

 Avoid: Colors with big difference in luminance (Black & White, Grey)



Change the characters color periodically

- Use Bright colors with little difference in luminance.

 - Cycle : Change the characters color and background color every 30 minutes



- Every 30 minutes, change the characters with movement.



- All area display Moving image together with Logo periodically.

 - Cycle: Display moving image together with Logo for 60 seconds after 4 hours in use.

- The best way to protect your monitor from Image retention is to turn Power off, or set your PC, or System to operate a Screen Saver program when you are not using it. Also Warranty service will be limited based on instruction guide.

Apply the Screen Scroll function on Product

- Apply the Screen Scroll function

 - Symptom: Horizontal Bar with Black Color move up and down.



- Select method

- Instruction Guide : OSD Menu -> Set Up -> Safety Screen -> Screen Scroll
- Time Interval : 1 ~ 10 hours (Recommend : 1)
- Time Period : 1 ~ 5 second (Recommend : 5)

Note

(Please check CD's User Guide at "OSD Function", some model's will not available)

Apply the Screen Pixel function on Product

- Apply the Screen Pixel function

 - Symptom: Dot with Black Color move up and down.



- Select method

- Instruction Guide : OSD Menu -> Set Up -> Safety Screen -> Pixel
- Time Interval : 1 ~ 10 hours (Recommend : 1)
- Time Period : 10 ~ 50 second (Recommend : 50)

- Apply the Screen Bar function

 - Symptom: Horizontal / Vertical Bar with Black Color move up and down.



- Select method

- Instruction Guide : OSD Menu -> Set Up -> Safety Screen -> Bar
- Time Interval : 1 ~ 10 hours (Recommend : 1)
- Time Period : 10 ~ 50 second (Recommend : 50)

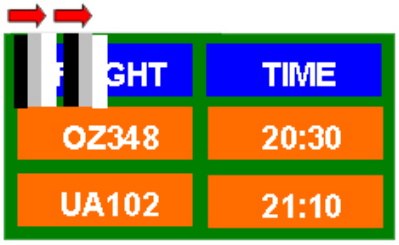
Note

(Please check CD's User Guide at "OSD Function", some model's will not available.)

Apply the Screen Erasing function on Product

- Apply the Screen Erasing function

 - Symptom: 2 Vertical blocks move with erasing the display



- Select method

- Instruction Guide : OSD Menu -> Set Up -> Safety Screen -> Eraser
- Time Interval : 1 ~ 10 hours (Recommend : 1)
- Time Period : 10 ~ 50 second (Recommend : 50)

Note

(Please check CD's User Guide at "OSD Function", some model's will not available)

Appendix

Contact SAMSUNG WORLDWIDE

Note

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

	North America	
U.S.A	1-800-SAMSUNG(726-7864)	http://www.samsung.com
CANADA	1-800-SAMSUNG(726-7864)	http://www.samsung.com/ca
MEXICO	01-800-SAMSUNG(726-7864)	http://www.samsung.com
	Latin America	
ARGENTINE	0800-333-3733	http://www.samsung.com/ar
BRAZIL	0800-124-421	http://www.samsung.com
	4004-0000	
CHILE	800-SAMSUNG(726-7864)	http://www.samsung.com/cl
COLOMBIA	01-8000112112	http://www.samsung.com/co
COSTA RICA	0-800-507-7267	http://www.samsung.com/latin
ECUADOR	1-800-10-7267	http://www.samsung.com/latin
EL SALVADOR	800-6225	http://www.samsung.com/latin
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin
HONDURAS	800-7919267	
JAMAICA	1-800-234-7267	http://www.samsung.com/latin
NICARAGUA	00-1800-5077267	
PANAMA	800-7267	http://www.samsung.com/latin
PUERTO RICO	1-800-682-3180	http://www.samsung.com/latin
REP. DOMINICA	1-800-751-2676	http://www.samsung.com/latin
TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	http://www.samsung.com/latin
VENEZUELA	0-800-100-5303	http://www.samsung.com/latin
	Europe	
AUSTRIA	0800-SAMSUNG (726-7864)	http://www.samsung.com/at
BELGIUM	0032 (0)2 201 24 18	http://www.samsung.com/be
CZECH REPUBLIC	844 000 844	http://www.samsung.com/cz
	Distributor pro Českou republiku: Samsung Zrt., česka organizační složka Vyskočilova 4, 14000 Praha 4	
DENMARK	70 70 19 70	http://www.samsung.com/dk
EIRE	0818 717 100	http://www.samsung.com/ie
FINLAND	030-6227 515	http://www.samsung.com/fi
FRANCE	3260 SAMSUNG (€ 0,15/Min)	http://www.samsung.com
	08 25 08 65 65 (€ 0,15/Min)	

Europe

GERMANY	01805 - SAMSUNG (726-7864) (€ 0,14/Min)	http://www.samsung.com
HUNGARY	06-80-SAMSUNG (726-7864)	http://www.samsung.com
ITALIA	800-SAMSUNG (726-7864)	http://www.samsung.com
LUXEMBURG	0035 (0)2 261 03 710	http://www.samsung.com/be
NETHERLANDS	0900 SAMSUNG (726-7864 € 0,10/Min)	http://www.samsung.com/nl
NORWAY	815-56 480	http://www.samsung.com/no
POLAND	0 801 801 881	http://www.samsung.com/pl
	022-607-93-33	
PORTUGAL	80820-SAMSUNG (726-7864)	http://www.samsung.com/pt
SLOVAKIA	0800-SAMSUNG (726-7864)	http://www.samsung.com/sk
SPAIN	902 10 11 30	http://www.samsung.com
SWEDEN	0771-400 200	http://www.samsung.com/se
SWITZERLAND	0800-SAMSUNG (726-7864)	http://www.samsung.com/ch
U.K	0845 SAMSUNG (7267864)	http://www.samsung.com

CIS

ESTONIA	800-7267	http://www.samsung.ee
LATVIA	800-7267	http://www.samsung.com/lv
LITHUANIA	8-800-77777	http://www.samsung.lt
KAZAKHSTAN	8-10-800-500-55-500	http://www.samsung.kz
KYRGYZSTAN	00-800-500-55-500	
RUSSIA	8-800-555-55-55	http://www.samsung.ru
TADJIKISTAN	8-10-800-500-55-500	
UKRAINE	8-800-502-0000	http://www.samsung.com
UZBEKISTAN	8-10-800-500-55-500	http://www.samsung.uz

Asia Pacific

AUSTRALIA	1300 362 603	http://www.samsung.com
CHINA	800-810-5858	http://www.samsung.com
	010-6475 1880	
HONG KONG	3698 - 4698	http://www.samsung.com/hk
INDIA	3030 8282	http://www.samsung.com
	1800 110011	
INDONESIA	0800-112-8888	http://www.samsung.com
JAPAN	0120-327-527	http://www.samsung.com/jp
MALAYSIA	1800-88-9999	http://www.samsung.com/my
NEW ZEALAND	0800 SAMSUNG(726-7864)	http://www.samsung.com/nz
PHILIPPINES	1800-10-SAMSUNG(726-7864)	http://www.samsung.com/ph
SINGAPORE	1800-SAMSUNG(726-7864)	http://www.samsung.com
THAILAND	1800-29-3232, 02-689-3232	http://www.samsung.com

Asia Pacific

TAIWAN	0800-329-999	http://www.samsung.com/tw
VIETNAM	1 800 588 889	http://www.samsung.com

Middle East & Africa

SOUTH AFRICA	0860-SAMSUNG(726-7864)	http://www.samsung.com
TURKEY	444 77 11	http://www.samsung.com
U.A.E	800-SAMSUNG(726-7864)	http://www.samsung.com
	8000-4726	

Terms

Dot Pitch	The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm
Vertical Frequency	The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called the Vertical Frequency or Refresh Rate. Unit: Hz Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.
Horizontal Frequency	The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz
Interlace and Non-Interlace Methods	Showing the horizontal lines of the screen from the top to the bottom sequentially is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.
Plug & Play	This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.
Resolution	The number of horizontal and vertical dots used to compose the screen image is called the 'resolution'. This number shows the accuracy of the display. A high resolution is good for performing multiple tasks as more image information can be shown on the screen. Example: If the resolution is 1360 x 768, this means the screen is composed of 1360 horizontal dots (horizontal resolution) and 768 vertical lines (vertical resolution).

Correct Disposal

Correct Disposal of This Product (Waste Electrical & Electronic Equipment) - Europe only



(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Authority

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